FACT SHEET
August 29, 2003

Proposed Issuance of National Pollutant Discharge Elimination System (NPDES) Storm Water General Permit for Small Municipal Separate Storm Sewer Systems (MS4s)

SUMMARY: The Director of the EPA Region 6 Water Quality Management Division is proposing to issue NPDES general permits for storm water discharges from small municipal separate storm sewer systems (MS4s) located in the State of New Mexico, Indian Country Lands within New Mexico, and Indian Country Lands within Oklahoma. While the permit language is structured as if it were a single general permit, EPA is actually proposing to issue three legally separate and distinctly numbered general permits. Parts 1-7 of the proposed general permit and the Appendices are common to all three proposed general permits, while Part 8 of the proposed general permit contains the State, Indian Country Land or other area-specific conditions that make each of the permits unique. This fact sheet supports and refers collectively to all three proposed general permits. Unless otherwise specified, the term "permit" may be used to refer collectively to all three permits. NPDES permit coverage for these discharges is required in accordance with section 402(p) of the 1987 Amendments to the Clean Water Act (CWA), and EPA regulations for Phase I (55 FR 47990, November 16, 1990) and Phase II (64 FR 68722, December 8, 1999) storm water discharges (40 CFR 122.26, 122.30-122.37). To obtain discharge authorization under the proposed permit, dischargers would be required to submit a notice of intent (NOI) requesting discharge authorization. The NOI would need to include a storm water management program describing best management practices which the discharger will implement to control pollutants in the discharges in accordance with the requirements of the CWA. Annual reporting would also be required to provide information on the status of the implementation of the storm water management program. In this fact sheet, the Director is also providing information on waivers and the status of designations that could add to or subtract from the universe of small MS4s that will require permit coverage.

PUBLIC COMMENT PERIOD: Comments on the proposed general permit must be received (or postmarked) no later than **45 days** after the publication date of the Federal Register Notice announcing availability of the proposed general permits for comment at the address below. Comments on the proposed general permits must reference **Docket No. 6WQ-03-SW01**. Comments postmarked or received (if hand delivered or submitted electronically) after the close of the comment period will be marked "late." EPA is not required to consider these late comments.

While not required to do so, EPA Region 6 is inviting and will consider comments and input on the designation review of New Mexico small MS4s outside of urbanized areas through the date 45 days after the Federal Register Notice of availability. Comments on the designation reviews process or preliminary decisions must reference **"MS4 Designation Review"**.

ADDRESSES: Comments on the proposed general permit and the small MS4 designation review should be sent to Small MS4 General Permit, Attn: Ms. Diane Smith, EPA Region 6, Water Quality Protection Division (6WQ-CA), 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733. The proposed general permit and fact sheet documents can be found on the Internet at **http://www.epa.gov/earth1r6/6wq/npdes/sw/ms4/.**

Comments may also be submitted in electronic format (Wordperfect 9, MS Word 2000, or ASCII Text formats only, avoiding use of special characters) to: the above address or via e-mail to smith.diane@epa.gov.

PUBLIC MEETINGS: EPA will be holding two informal public meetings which will include a presentation on the proposed general permits and a question and answer session. Because informal public meetings accommodate group discussion and question and answer sessions, public meetings have been used for many storm water general permits and appear to be more valuable than formalized public hearings in helping the public understand a proposed storm water general permit and identify the issues of concern. Written, but not oral, comments for the official permit record will be accepted at the public meetings. Written comments generated from what was learned at a public meeting (or from discussion with someone who did attend) may also be submitted any time up to the end of the comment period.

Albuquerque, NM - September 11, 2003 @ 1:00 pm

Albuquerque Technical Vocational Institute
Workforce Training Center
5600 Eagle Rock Ave NE
Albuquerque, NM 87113

Directions: From I-25, take Exit 233, Alameda Blvd
Go West on Alameda to San Mateo
Go North on San Mateo to Eagle Rock Ave
The Workforce Training Center is on the south side of Eagle Rock Ave

Oklahoma City, OK - September 15, 2003 @ 1:00 pm

Metro Tech Conference Center (Auditorium)
1900 Springlake Drive
Oklahoma City, OK 73111

Located at intersection of Martin Luther King and Springlake Drive between NE 36th and NE 50th, just south of Oklahoma City Zoo and the Kirkpatrick Center.

Directions from the South:
I-35N to NE 36th

Go West (left) on 36th to Martin Luther King
Go North (right) on Martin Luther King to Springlake Drive

REQUESTS FOR A PUBLIC HEARING: Interested persons may also request a public hearing pursuant to 40 CFR 124.11 concerning the proposed general permit. Requests for a public hearing must be sent or delivered in writing to the same address for comments prior to the close of the comment period. Requests for a public hearing must state the nature of the issues proposed to be raised in the hearing. Pursuant to 40 CFR 124.12, the Regional Administrator will hold a public hearing if he finds, on the basis of requests, a significant degree of public interest in the proposed permit(s). If the Regional Administrator decides to hold a public hearing, a public notice of the date, time and place of the hearing will be made at least 30 days prior to the hearing. Any person may provide written or oral statements and data pertaining to the proposed permit at the public hearing.

FOR FURTHER INFORMATION CONTACT: For further information on the proposed general permit, contact Ms. Terry Branch at 214-665-6667 or branch.terry@epa.gov or Ms. Diane Smith at 214-665-2145 or smith.diane@epa.gov. The mail address for both Ms. Branch and Ms. Smith is EPA Region 6, Customer Assistance Branch (6WQ-CA), 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733.

ADMINISTRATIVE RECORD: The administrative record for the proposed general permits has been created under **Docket No. 6WQ-03-SW01.** The proposed general permit and other related documents in the administrative record are on file and may be inspected any time between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding legal holidays, at the addresses listed for submission of comments. It is recommended that your write or call to the contact above for an appointment, so the record(s) will be available at your convenience.

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Background

The following is an overview of the basic requirements of the NPDES storm water permit program and the requirements of the proposed general permit. Additional information may be obtained via the EPA Region 6 Storm Water Program website at: http://www.epa.gov/region6/sws/ .

A. Statutory and Regulatory Background

The 1987 Water Quality Act (WQA) amended the Clean Water Act (CWA) by adding section 402(p) which requires that NPDES permits be issued for various categories of storm water discharges. Section 402(p)(2) requires permits for the following five categories:

1. Discharges permitted prior to February 4, 1987;
2. Discharges associated with industrial activity;
3. Discharges from large municipal separate storm sewer systems (MS4s) (systems serving a population of 250,000 or more);
4. Discharges from medium MS4s (systems serving a population of 100,000 or more, but less than 250,000); and
5. Discharges judged by the permitting authority to be significant sources of pollutants or which contribute to a violation of a water quality standard.

The five categories listed above are generally referred to as Phase I of the storm water program. Phase I Large and Medium MS4s in areas with Small MS4s affected by this permit include Albuquerque, NM; Oklahoma City, OK; Tulsa, OK; and El Paso, TX (part of the El Paso Urbanized Area extends into New Mexico). Two general permits have been issued by EPA for storm water discharges associated with industrial activity in areas covered by this permit. One general permit covers construction projects disturbing one or more acres (68 FR 39087, July 1, 2003) and a multi-sector general permit (MSGP) has been issued for other discharges associated with industrial activity (65 FR 64746, October 30, 2000). Copies of these general permits may be obtained via the EPA Region 6 Storm Water Program website at: http://www.epa.gov/region6/sws/ .

In 1991, provisions within the Inter-Modal Surface Transportation Efficiency Act (ISTEA) temporarily exempted storm water discharges associated with industrial activities at facilities operated by municipalities with populations of less than 100,000 (with the exception of power plants, airports, and uncontrolled sanitary landfills) from the need to obtain an NPDES industrial storm water permit. Under the provisions of the NPDES Storm Water Program Phase II Final Rule, storm water discharges previously exempted under ISTEA (which includes construction activities disturbing 5 or more acres) did not require permit coverage until March 10, 2003 (40 CFR 122.26(e)(1)(ii)).

Section 402(p)(6) of the CWA also requires permitting for certain additional storm water discharges (Phase II of the storm water program) after considering the results of two studies which are required by section 402(p)(5) of the CWA. These studies address the nature of the

pollutants in the Phase II storm water discharges (EPA, 1995) and the available control mechanisms for the pollutants (EPA, 1994). Based on these studies and other available information, EPA promulgated final Phase II storm water regulations on December 8, 1999 (64 Fed. Reg. 68722). These regulations set forth the additional categories of discharges to be permitted and the requirements of the program. The additional discharges to be permitted are:

1. Small MS4s (see section I.B below)
2. Small construction sites (sites which disturb one to five acres)
3. Industrial facilities owned or operated by small municipalities which were temporarily exempted from the Phase I requirements in accordance with the provisions of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.
4. Discharges designated by the Director on a case-by-case basis to protect water quality.

The 1987 WQA also clarified that industrial storm water discharges are subject to the BAT/BCT requirements of section 301 of the CWA and applicable water quality standards. For MS4s, the WQA specifies a new technology-related level of control for pollutants in the discharges - control to the maximum extent practicable (MEP). However, the WQA is silent on the issue of compliance with water quality standards for MS4 discharges. On August 1, 1996, EPA issued the Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits policy that addressed use of Best Management Practices (BMPs) in storm water permits to provide for attainment of water quality standards (available online at http://www.epa.gov/npdes/pubs/swpol.pdf). In September 1999, the Ninth Circuit Court addressed the water quality standards issue and ruled that water quality standards compliance by MS4s is discretionary on the part of the permitting authority (Defenders of Wildlife v. Browner, 191 F.3d 1159 (9th Cir. 1999)). Sections III.E and IV.G.2 of this fact sheet discuss the permit requirements which are proposed to address this issue. On November 22, 2002, the Directors of EPA's Office of Wetlands, Oceans, and Watersheds and the Office of Wastewater Management clarified NPDES permit requirements based on Total Maximum Daily Loads (TMDLs) addressing storm water sources in Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs memo to regional Water Division Directors (available online at http://www.epa.gov/npdes/pubs/final-wwtmdl.pdf). Where a TMDL addresses storm water discharges from an MS4 or other regulated storm water discharge, NPDES permits must be consistent with assumptions and requirements of the Waste Load Allocations in the TMDL. EPA expects that most water quality-based effluent limits for NPDES-regulated MS4 and small construction discharges will be in the form of Best Management Practices, and that numeric limitations will be used only in rare instances.

B. Small MS4s

The following four categories of small MS4s are potentially subject to permitting under

Phase II of the storm water program (40 CFR 122.32):

1. MS4s operated by municipalities in urbanized areas as defined by the Census Bureau. These MS4s must be permitted unless they receive a waiver based on the criteria discussed below in section I.C. An urbanized area is basically a core city and urban fringe with a population of 50,000 or more.
2. Designated MS4s operated by municipalities which are outside urbanized areas which have a population of 10,000 or more and population density of 1,000/mi^2. Permitting of these MS4s is required on a case-by-case basis based on factors such as rapid growth, high population density or adverse water quality impacts. Small MS4 designation reviews by Region 6 are discussed in section I.G.
3. MS4s which contribute substantial pollutant loads to regulated MS4s through interconnections.
4. MS4s designated by petition.

Due to the change the Census Bureau made in the definition of "Urbanized Area" for the 2000 Census, Region 6 will utilize only the 2000 Census Urbanized Areas for determining which MS4s are automatically designated. Relying on the 2000 Census will eliminate potential confusion where boundaries of Urbanized Areas changed solely due to the change in definition.

C. Waivers for Small MS4s in Urbanized Areas

The Phase II regulations at 40 CFR 122.32(d) and (e) provide permitting waivers for small MS4s in urbanized areas under the following circumstances:

1. MS4s with a Population Less than 1,000

a. The MS4 is not contributing substantially to the pollutant loadings of a physically interconnected MS4 that is regulated by the NPDES storm water program; and

b. If discharges include any pollutant(s) that have been identified as a cause of impairment of any receiving water body, storm water controls are not needed based on wasteload allocations that are part of an EPA approved or established "total maximum daily load" (TMDL) that addresses the pollutant(s) of concern.

2. MS4s with a Population of 1,000 to 10,000

a. The permitting authority has evaluated all waters of the U.S., including small streams, tributaries, lakes, and ponds, that receive a discharge from the MS4;

b. For all such waters, the permitting authority has determined that storm water controls are not needed based on wasteload allocations that are part of an EPA approved or established TMDL that addresses the pollutant(s) of concern or, if a TMDL has not been developed or approved, an equivalent analysis that determines sources and allocations for the pollutant(s) of concern. Pollutant(s) of concern include biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation),

pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that receives a discharge from the MS4; and

c. The permitting authority has determined that future discharges from the MS4 do not have the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

3. Claiming Waivers

As described above, waivers may generally be granted for MS4s with a population of 1,000 to 10,000 only if comprehensive information is available showing that the MS4 is not a threat to water quality. For the MS4s with a population less than 1,000, however, a waiver may be granted unless specific information is available showing that the discharges are a threat to water quality. MS4s with a population less than 1,000 wishing to claim a waiver should submit information indicating that the MS4 meets the waiver criteria listed in Part I.C.1 to:

Miguel I. Flores
Director
Water Quality Protection Division (6WQ)
Environmental Protection Agency
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733

Only the portion of a MS4's population located within an urbanized areas is used for deciding whether or not a waiver may be available. Maps of urbanized areas available via http://www.epa.gov/npdes can be helpful in estimating the populations located within the Urbanized Area. See Section D below for guidance on estimating population for state and federal facilities. The New Mexico Environment Department CWA 303(d) list of impaired waters is available online at http://www.nmenv.state.nm.us/swqb/2000-2002_New_Mexico_303d_List.pdf

D. Facilities Operated by the Federal or State Government, or Other Public Entity

The definition of a small MS4 in the Phase II regulations (40 CFR 122.26(b)(16)(iii)) includes storm sewers at facilities operated by the Federal or State government (or other public entities such as a sewer or port district) such as military bases, universities, hospitals and prisons. However, the definition does not include facilities which consist of very discrete areas, such as an individual post office; elementary, middle, or high school; state, county or federal building; etc. which do not have a "system" of municipal storm sewers. For example, a few buildings in a complex and their associated parking lots and driveways with storm drains connecting to the surrounding city's MS4 would not be likely to operate an MS4. On the other hand, a military base with interior roads and storm sewer infrastructure operated by the base would have an MS4.

Most facilities of this nature would be subject to permitting by virtue of being located within urbanized areas. The Census Bureau provides maps of urbanized areas which may be used by potentially affected facilities to determine if they are located within an urbanized area. EPA has made Urbanized Area maps based on Census Bureau data available online at http://cfpub.epa.gov/npdes/stormwater/urbanmaps.cfm Region 6 is not aware of any facilities of this nature in the permit areas which are outside an urbanized area and which have the population and population density by themselves to be potentially designated for permitting as described above in section I.B.2. However, facilities located within MS4s which are designated and permitted as described in section I.B.2 would be subject to permitting (e.g., military base located within a designated city).

Potentially affected facilities within urbanized areas are also eligible for the permitting waiver discussed above in section I.C based on population. The Phase II regulations do not provide guidance on how to determine population for these facilities. Region 6 believes that a reasonable method is to combine the total resident population and the number of full-time workers. Facility operators should use this method to determine their population, and the applicability of the Phase II regulations to their specific facilities.

It should also be noted that county or city facilities (such as hospitals or prisons) with systems of separate storm sewers that are located within a permitted area for the same county or city generally would not need a separate permit. The discharges from these facilities would be covered by the county or city-wide MS4 permit. However, if a county or city operates a facility with a system of separate storm sewers within a municipal separate storm sewer system and the facility is outside its permitted area (e.g., county hospital complex located in an incorporated city, etc.), the facility would also need permit coverage for that facility. This extended coverage is available by indicating on the MS4 map that those facilities are considered part of the larger MS4 and including applicable conditions for the facilities in the operator's SWMP. Facilities with regulated discharges of storm water associated with industrial or construction activities do require permit coverage, which could be obtained by separate general or individual permit.

E. Environmental Impacts of Discharges from Small MS4s

The 1987 decision by Congress to require NPDES permitting for the storm water discharges discussed above was based on a growing awareness of the environmental significance of nonpoint sources of pollutants. For example, EPA's report entitled "National Water Quality Inventory, 1998 Report to Congress" (EPA, 2000) shows that storm water related discharges from non-point and point sources are the leading causes of existing water quality impairments.

The Nationwide Urban Runoff Program (NURP), which was sponsored by EPA in the years 1978 through 1983, also showed that storm water runoff is a significant source of pollutants (EPA, 1983). The study identified 77 priority toxic pollutants in storm water runoff discharged from residential, commercial and light industrial areas. Of these toxic pollutants, heavy metals such as copper, lead and zinc were detected most frequently and at levels of greatest concern. More information and copies of documents with additional information on the

environmental impacts of storm water discharges are available via EPA's storm water web page at www.epa.gov/npdes/stormwater.

F. Permitting Options for Small MS4s

The Phase II regulations provide three options for storm water permitting for small MS4s:

1. Apply for coverage under the proposed general permit discussed in this fact sheet (or an alternate general permit if one were to be issued).
2. Apply for an individual permit.
3. Seek coverage as a co-permittee under an existing Phase I MS4 permit via a permit modification (such as one of the Phase I permits mentioned in section I.A above).

Region 6 believes that most EPA-regulated small MS4s in Region 6 will seek coverage under the applicable proposed general permit (which can also accommodate cooperative or shared programs between individual MS4s under the general permit). However, other options are also available to small MS4s which may believe that the terms and conditions of the general permit are not appropriate for them. Application requirements for individual permits are found at 40 CFR 122.33(b)(2).

G. Designation Review of Small MS4s Outside Urbanized Areas for Possible Permitting

In addition to automatically designated MS4s located within a Census-designated Urbanized Area, permitting authorities must review for possible designation those MS4s located outside an Urbanized Area that have a population of at least 10,000 and a population density of 1,000 per square mile. EPA Region 6 is the NPDES permitting authority for small MS4s in the state of New Mexico and on Indian Country lands within the states Louisiana, New Mexico, Oklahoma, and Texas. According to 2000 Census information, candidate small MS4s in areas under EPA Region 6 jurisdiction are all located within New Mexico. While this designation review requirement is in a section of the NPDES regulations addressing requirements for authorized State programs (40 CFR 123.35(b)), EPA Region 6, in coordination with the State of New Mexico, reviewed the Alamagordo, Artesia, Clovis, Deming, Gallup, Hobbs, Las Vegas, Los Alamos (an unincorporated city), Portales, Roswell and Silver City small MS4s for possible designation. As a result of this review, EPA believes designation of Alamagordo, Artesia, Deming, Gallup, Hobbs, Los Alamos (an unincorporated city), Portales, and Silver City is not necessary at this time to protect water quality. EPA requests additional input and comment on whether these small MS4s should or should not be designated in order to protect water quality. Fact Sheet Addendums D and E contain more information on the designation review.

H. Opportunities for Public Input Into the Permit Process

As with all NPDES permits, the public has the opportunity to provide input on the permit

during the public comment period described at the beginning of this document. Since general permits are issued prior to any particular applicant being identified, the conditions of today's permit are designed to control pollutants to the Maximum Extent Practicable in all discharges that fall within the general permit's scope of eligibility. As provided under 40 CFR 122.34(a), the permit allows up to 5 years during this first permit term for permittees to complete the process of fully developing and implementing the storm water management program. In developing NPDES permit conditions, EPA bases decisions on the assumption that the permittee will fully comply with all applicable permit conditions.

In reviewing the proposed permits, the public should take into consideration that only those MS4 operators that meet all eligibility conditions will be able to use the permit, and then must comply with all permit conditions. Reviewers should also note that the Phase II regulations do allow up to 5 years for the operator of a small MS4 to complete development and implementation of a storm water management program. The terms and conditions of the general permit form the framework and minimum requirements for these programs. Comments on the permit requirements and/or the nature of these "future" programs that will be developed during the life of the permit must be made in the context of the proposed general permit.

Consistent with 40 CFR 122.34(b)(2), Part 5.2.2 of the permit requires permittees to develop and implement a public involvement/participation program as part of their comprehensive storm water management program. Interested members of the public are encouraged to contact their local officials for information on how they can participate in the development and implementation of local storm water management programs.

To obtain coverage under the general permit, the operator of the MS4 will need to submit a Notice of Intent and information on their storm water management program (see Part 3.2 of the permit). Once these documents have been received by EPA, they become public records and are available for review by interested parties under the Freedom of Information Act.

The Federal regulations at 40 CFR 122.28(b)(3) regarding administration of general permits allows the Director to require any discharger authorized by a general permit to apply for and obtain an individual NPDES permit. This eventuality is covered by Part 6.18 of the permit and provides a mechanism to address situations with individual dischargers where there is a water quality problem with the discharges from a particular MS4 and the permittee has failed to address the problem with appropriate modifications to the storm water management program. Any interested person may petition the Director to take action under these regulations.

II Coverage of the Proposed General Permit

A. Geographic Coverage

Table 1 below shows the geographic coverage of the proposed general permit, including the specific permit numbers assigned to each area:

Table 1: Permit Areas	
Permit Number	**Areas of Coverage**
OKS04000I	Indian Country Lands within the State of Oklahoma
NMS04000I	Indian Country lands within the State of New Mexico, except Navajo Reservation lands and Ute Mountain Ute Reservation lands (permitted by EPA Regions 9 and 8, respectively)
NMS040000	The State of New Mexico, except Indian Country Lands

The permit geographic coverage areas shown above are areas within Region 6 where a State or Tribal permitting program has not been authorized under section 402(b) of the CWA. Indian country includes all lands within Indian reservations, all dependent Indian communities, and Indian allotments. In Oklahoma it also includes lands held in trust for the benefit of Tribes. At this time, no regulated MS4s under EPA jurisdiction are located in Arkansas, Louisiana, or Texas, so permits for these areas are not being proposed by Region 6. Most MS4s in Arkansas, Louisiana, Oklahoma, and Texas are regulated by NPDES-authorized State programs.

B. MS4s Covered by the 2000 Census

Appendices 6 and 7 to the Phase II regulations of December 8, 1999 provided a list of the small MS4s within Urbanized Areas as of the 1990 Census. As discussed above, EPA Region 6 is relying solely on 2000 Census Urbanized Areas to determine which MS4s are subject to permitting. Table 2 below provides the names of the city and county "places" within Region 6 which are located in areas covered by the proposed MS4 general permits. Note that the list does not include the names of all non-traditional municipal, state, tribal, or federal MS4s located within these areas which would also need permits. Maps of Census 2000 Urbanized Areas and lists of cities and counties located within them are available online at http://cfpub1.epa.gov/npdes/stormwater/urbanmaps.cfm.

Table 2 - Places Within Census 2000 Urbanized Areas				
UA Name	**County**	**Place Name**	**Population 2000** by County**	**Total Population 2000****
Fort Smith, AR--OK****	Le Flore, OK	Arkoma	1910	1910
	Sequoyah, OK	Moffett	179	179
	Le Flore, OK	Pocola	181	181
	Sequoyah, OK	*Sequoyah County	2	2
Lawton, OK****	Comanche	Lawton	89,503	89503
	Comanche	*Comanche County	53	53
Norman, OK****	Cleveland	Hall Park	967	967
	Cleveland	Noble	3,985	3985
	Cleveland	Norman	81,526	81526
	Cleveland	*Cleveland County	0***	0***
Oklahoma City, OK****	Oklahoma	Bethany	20,307	20307
	Oklahoma	Choctaw	4,226	4226
	Oklahoma	Del City	22,125	22125
	Oklahoma	Edmond	65467	65467
	Oklahoma	Forest Park	658	658
	Oklahoma	Midwest City	53,864	53864
	Cleveland	Moore	40,445	40445
	Canadian	Mustang	12,794	12794
	Oklahoma	Nichols Hills	4,056	4,056
	Oklahoma	Nicoma Park	2,415	2415
	Canadian	Oklahoma City	19,407	471445
	Cleveland	Oklahoma City	36,784	
	Oklahoma	Oklahoma City	415,254	
	Oklahoma	Smith Village	40	40
	Oklahoma	Spencer	3,535	3,535
	Oklahoma	The Village	10,157	10,157
	Oklahoma	Valley Brook	817	817
	Oklahoma	Warr Acres	9,735	9,735
	Oklahoma	Woodlawn Park	161	161
	Canadian	Yukon	20,506	20506

Table 2 - Places Within Census 2000 Urbanized Areas				
UA Name	**County**	**Place Name**	**Population 2000** by County**	**Total Population 2000****
	Cleveland	*Cleveland County	31	31
	Logan	*Logan County	2,708	2708
	Oklahoma	*Oklahoma County	1511	1511
Tulsa, OK	Tulsa	Bixby	10,551	10,551
	Tulsa	Broken Arrow	67,701	74310
	Wagoner	Broken Arrow	6,609	
	Rogers	Catoosa	3,793	5334
	Wagoner	Catoosa	1,541	
	Wagoner	Coweta	6,632	6632
	Tulsa	Jenks	8,625	8,625
	Wagoner	New Tulsa	547	547
	Creek	Oakhurst	753	1930
	Tulsa	Oakhurst	1,177	
	Osage	Sand Springs	266	16625
	Tulsa	Sand Springs	16,359	
	Creek	Sapulpa	16,322	16322
	Tulsa	Sperry	886	886
	Osage	Tulsa	5,329	390160
	Tulsa	Tulsa	384831	
	Tulsa	Turley	2,921	2,921
	Creek	*Creek County	4,006	4006
	Rogers	*Rogers County	1,214	1,214
	Tulsa	*Tulsa County	8,866	8,866
	Wagoner	*Wagoner County	9400	9400
Albuquerque, NM	Bernalillo	Albuquerque	447,780	447780
	Sandoval	Bernalillo	6,600	6,600
	Bernalillo	Carnuel	511	511
	Bernalillo	Corrales	676	7334
	Sandoval	Corrales	6,658	
	Bernalillo	Isleta Village Proper	487	487
	Bernalillo	Los Ranchos de Albuquerque	5,092	5092
	Bernalillo	North Valley	11,923	11923

Table 2 - Places Within Census 2000 Urbanized Areas				
UA Name	**County**	**Place Name**	**Population 2000** by County**	**Total Population 2000****
	Bernalillo	Rio Rancho	0***	51,055***
	Sandoval	Rio Rancho	51,055	
	Sandoval	Santa Ana Pueblo	433	433
	Bernalillo	South Valley	38,572	38572
	Bernalillo	*Bernalillo County	27,294	27,294
	Sandoval	*Sandoval County	1,110	1,110
El Paso, TX--NM	Dona Ana, NM	Anthony	7,803	7,803
	Dona Ana, NM	Santa Teresa	1,898	1,898
	Dona Ana, NM	Sunland Park	13,257	13,257
	Dona Ana, NM	*	3,378	3,378
Farmington, NM	San Juan	Aztec	6,029	6029
	San Juan	Farmington	36,946	36,946
	San Juan	Flora Vista	1,383	1,383
	San Juan	Kirtland	3,610	3610
	San Juan	*San Juan County	5,326	5326
Las Cruces, NM	Dona Ana	Dona Ana	1,379	1379
	Dona Ana	Las Cruces	73,974	73974
	Dona Ana	Mesilla	1,853	1853
	Dona Ana	University Park	2,732	2732
	Dona Ana	*Dona Ana County	24,248	24248
Santa Fe, NM	Santa Fe	Agua Fria	1,964	1964
	Santa Fe	La Cienega	1,858	1858
	Santa Fe	Santa Fe	60,916	60916
	Santa Fe	Tesuque	4	4
	Santa Fe	*Santa Fe County	15595	15595

* The population calculation for this area provides the population within the UA that is not located within an incorporated place. An incorporated place is created to provide governmental functions for a concentration of people. For example, a city or municipality is an incorporated place.

** Some incorporated places appear twice since they are located within multiple counties. To calculate the total population within the incorporated place add all values associated with it together.

*** The portion of Cleveland County in the Norman UA is part of a University campus meaning the area does not have a permanent population.

**** The general permit EPA proposes for Oklahoma would cover only those small MS4s located on Indian Country lands. Those regulated small MS4s in Oklahoma Urbanized Areas that are not on Indian Country lands must apply to the Oklahoma Department of Environmental Quality for permits.

Appendix 7 of the Phase II rule listed the MS4s which, based on the 1990 Census, were outside urbanized areas, and may be designated for permitting based on criteria (such as the factors mentioned above in section I.B.2) which the permitting authority is required to develop. Based on the 2000 census, the following candidate MS4s were under EPA's jurisdiction: Alamagordo, Artesia, Clovis, Deming, Gallup, Hobbs, Las Vegas, Los Alamos (Census Designated Place - not an incorporated city), Portales, Roswell, and Silver City - all in New Mexico.

C. Authorized Discharges

Subject to the terms and conditions of Parts 1.2, 1.3, and 1.4, the general permit authorizes municipal storm water discharges and certain allowable non-storm water discharges from all parts of the operator's municipal separate storm sewer system. The list of allowable non-storm water discharges in Part 1.3.2 are taken primarily from 40 CFR 122.34(b)(3)(iii). The permit also allows the permittee to identify other similar occasional incidental non-storm water discharges, such as those from charity car washes, that need not be treated as illicit discharges provided the discharges would not be significant contributor of pollutants either due to their nature or conditions placed upon them by the permittee.

Region 6 considered allowing MS4 operators to cover their construction and/or industrial activity storm water discharges under today's permit. However, additional provisions that would be needed for compliance with CWA, ESA, and NHPA requirements added undue complexity and largely negated the benefits of providing coverage under a single permit versus separately covering the operator's construction and industrial storm water discharges under the already available CGP and MSGP.

D. Small MS4 Waivers in Region 6

The Phase II regulations provide permitting waivers for municipal separate storm sewer systems located in Urbanized Areas at 40 CFR 122.32. MS4s with a population of less than 1,000 within the Urbanized Area must meet the criteria at 40 CFR 122.32(d), while those with a population of 1,000 - 10, 000 must meet the more restrictive criteria at 40 CFR 122.32(e). Region 6 has received requests for waivers under 40 CFR 122.32(d) from the Ysleta del Sur Pueblo located in the El Paso Urbanized Area and the Pueblo of Santa Ana located partially in the Albuquerque Urbanized Area.

In order to be waived under 40 CFR 122.32(d), the following criteria must be met:

- the MS4 must serve a population of less that 1,000 within the Urbanized Area
- the MS4 must not be contributing significantly to the pollutant loading of a physically interconnected regulated MS4
- if the MS4 discharges contain a pollutant that has been identified as a cause of impairment of any waterbody to which the MS4 discharges, storm water controls are not

needed based on wasteload allocations that are part of an EPA approved or established "Total Maximum Daily Load" (TMDL) that addresses the pollutant(s) of concern.

III. Limitations on Coverage

A. Storm Water Discharges Mixed with Non-Storm Water

The permit requires the permittee to prohibit all types of non-storm water discharges into its MS4, except for discharges that are authorized by a separate NPDES permit, and allowable non-storm water discharges listed in Part 1.3.2 of the permit. The permit also does not allow coverage for discharges of storm water associated with industrial activity (40 CFR §122.26(b)(14)(i) through (ix) and (xi)), or storm water discharges from construction activity (40 CFR §122.26(b)(14)(x) or 40 CFR §122.26(b)(15)). Coverage for such discharges is available under the October 30, 2000, Multi-Sector General Permit and the July 1, 2003 Construction General Permit.

B. Water Quality Protection

Federal regulations at 40 CFR §122.4(d) provide that no permit may be issued if the "conditions cannot ensure compliance with the applicable water quality requirements." Unlike individual permits that include requirements tailored to site-specific considerations, general permits, while tailored to specific industrial processes or types of discharges (e.g. offshore oil and gas or storm water), do not contain site-specific requirements that address the water quality conditions of the waters receiving the discharge. Therefore, general permits rely on permittees to certify that they meet the eligibility conditions and implement requirements that will ensure compliance with the conditions of the permit. The permit requirements at Parts 4.1 and 5.1 are intended to ensure that those seeking coverage under this general permit select, implement, and maintain BMPs for their Storm Water Management Program that will reduce the discharge of pollutants to the Maximum Extent Practicable and will be adequate and sufficient to meet water quality standards for all pollutants of concern.

For this permit, eligibility provisions do not hinge on the operator making a determination of compliance with applicable water quality standards. Rather, the permit limits operators from obtaining coverage under this permit if EPA makes such a determination. In those instances when EPA does make such a determination, EPA may require the operator to obtain coverage under an individual permit or may allow coverage under this permit provided that the operator includes appropriate controls and implementation procedures in its SWMP. As is required in Parts 4.1 and 5.1, operators are required to select, implement, and maintain BMPs that minimize pollutants in the discharge to the Maximum Extent Practicable (MEP) and will protect water quality. Except where specifically required by EPA to perform additional measures, a SWMP developed in accordance with these requirements will be considered as stringent as necessary to ensure that discharges do not cause or contribute to an excursion above any applicable state water quality standard. As such, EPA expects that compliance with the

terms of the general permit will ensure compliance with water quality standards.

C. Consistency with an Applicable Total Maximum Daily Load (TMDL) Analysis.

A Total Maximum Daily Load (TMDL) is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. Under current regulations and EPA program guidance (40 CFR §130.2 and §130.7), States establish TMDLs that include wasteload allocations from point sources, and load allocations from non-point sources and natural background conditions. Wasteload allocations are defined as the portion of a receiving water's loading capacity that is allocated to point source dischargers. TMDLs are established at levels necessary to attain and maintain the applicable narrative and numerical water quality standards with seasonal variations and a margin of safety that take into account any lack of knowledge concerning the relationship between effluent limitations and water quality. TMDLs are developed on a pollutant- and waterbody-specific basis. In some instances, TMDLs may combine multiple pollutants into one set of TMDL documents; however, the specific TMDL wasteload and load allocations are to be pollutant-specific. Although States are have the primary responsible for establishing TMDLs, in some instances EPA establishes the TMDLs. Once established or approved by EPA, TMDLs are implemented through water quality management plans and through NDPES permits. NPDES regulations, at 40 CFR §122.44(d)(1)(vii)(B), require that EPA ensure that NPDES permit limits are consistent with the assumptions and requirements of any available wasteload allocation pursuant to 40 CFR §130.7. Generally, this requires EPA to ensure that NPDES permits incorporate applicable assumptions and requirements detailed in TMDLs approved or established by EPA.

Those seeking coverage under the this general permit are responsible for determining whether specific conditions, over and above other requirements of the permit, have been identified by the TMDL authority as necessary to ensure consistency with the assumptions and requirements of TMDLs approved or established by EPA. There may be documents accompanying the TMDL (e.g., an implementation plan) or other documents that indicate the TMDL writer's intent to allocate a load for an individual discharger or for a class of dischargers. To the extent such documents are available, the operator should consider these materials when determining whether your discharge will be consistent with the TMDL. EPA encourages the operator to contact the authority that established the TMDL -- in most cases, the states -- to seek clarification if significant concerns exists over whether its activity will be consistent with a TMDL.

Consistent with EPA regulations and guidance, the permit requires that the operator determine whether an EPA approved or established TMDL exists that specifically addresses its discharge and if so, take necessary actions to be consistent with the assumptions and requirements of that approved TMDL. To make this determination, the operator will need to (1) determine the waterbody into which it discharges, (2) identify if there is an approved TMDL for that waterbody, (3) determine if that TMDL includes specific requirements (e.g., wasteload allocation or load allocation) applicable to its MS4, and (4) if so incorporate those requirements

into the SWMP and implement necessary steps to comply with them. EPA generally agrees that pollution controls required under this permit should not be delayed because the TMDL authority failed to specify all sources of loading in the TMDL. EPA is not requiring that permit coverage be delayed until such time as a TMDL can be revised. EPA has utilized a framework that allows the MS4 operator to obtain clarification from the TMDL authority on discharge provisions that would allow authorization under the permit. In support of the recently issued general permits for storm water associated with construction activity, EPA established a website at www.epa.gov/npdes/stormwater/cgp that includes links to state TMDL information and contacts. EPA expects that MS4 permittees can also access that website and identify either (1) the steps needed to be consistent with the assumptions and requirements of the TMDL or (2) a state or regional contact for making this determination. The operator may access that site or contact their state environmental agency or EPA region directly to make this determination. For more information on EPA's National TMDL program, including state and regional contacts, state maps showing impaired waterbodies, and example TMDLs, visit: www.epa.gov/owow/tmdl.

EPA recognizes that TMDLs vary in the complexity of their assumptions and quantification. In the process of determining whether or not an operator is consistent with the TMDL, the state or regional TMDL contact may request additional information. The TMDL may include details regarding recommended implementation activities that include certain narrative provisions such as implementation of specific BMPs; specified inspection, discharge monitoring or characterization, education, tracking or reporting requirements; or some combination of these or other conditions. In addition, some States may include implementation provisions in their TMDLs, although EPA regulations do not require this, and EPA does not approve or disapprove TMDLs based on these implementation provisions. However, any implementation language included in the TMDL that applies to MS4 general permit discharges should be considered part of the TMDL for the purposes of determining consistency of the SWMP with the TMDL. Further, EPA is clarifying that if the TMDL includes load allocations that the permitting jurisdiction later determines is for a discharge subject to this permit, then the load allocation is considered to be a wasteload allocation, and the SWMP needs to demonstrate consistency with any specific requirements implementing this load allocation.

As described in the permit, EPA will begin with the general assumption that where EPA has approved a TMDL that does not include a specific allocation for storm water discharges, or where the TMDL authority clarifies that it did not include a specific allocation for storm water or for MS4 discharges, adherence to a SWMP that meets the requirements of the permit will be consistent with the assumptions and requirements of such TMDLs. Inferring that the TMDL authority did not intend to make it impossible to permit storm water discharges in the absence of any discussion on this topic in the TMDL is reasonable because both rainfall and municipal storm sewers are so ubiquitous that it is unlikely that a policymaker would make such a significant decision consciously through silence. EPA will generally assume that such discharges were accounted for by the author of the TMDL, even if such discharges are not addressed specifically. Therefore, in the situation where an EPA approved or established TMDL has not specified a wasteload allocation for municipal storm water discharges, but has not specifically excluded these discharges, compliance with a SWMP that meets the requirements of

the permit will generally be assumed to be consistent with the approved TMDL. Similarly, where an EPA approved or established TMDL has specified a general wasteload allocation for muncipal storm water discharges, but no specific requirements for individual MS4s or individual discharge points have been identified, either in the TMDL, a watershed plan, or other similar document, then compliance with a SWMP that meets the requirements of the permit will generally be assumed to be consistent with the approved TMDL. If the EPA approved or established TMDL specifically precludes such discharges, the operator is not eligible for coverage under the permit. In selecting this approach, EPA is trying to balance the need to include permit conditions consistent with TMDLs with the need to clearly define permittee responsibilities.

D. Endangered Species

The Endangered Species Act (ESA) of 1973 requires Federal Agencies such as EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (also known collectively as the "Services"), that any actions authorized, funded, or carried out by the Agency (e.g., EPA issued NPDES permits authorizing discharges to waters of the United States) are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species (see 16 U.S.C. 1536(a)(2), 50 CFR 402 and 40 CFR 122.49(c)).

To ensure compliance with the ESA, Part 1.4.5 of the proposed permit restricts permit eligibility to those storm water discharges and storm water discharge-related activities which would not: (1) cause a "take" of listed threatened or endangered species, or (2) jeopardize a listed endangered or threatened species or adversely modify designated critical habitat. Applicants must meet one or more of the following five ESA criteria which are set forth in the permit:

> CRITERIA A: No endangered or threatened species or critical habitat are in proximity to the MS4 or the point(s) where authorized discharges reach the receiving water; or
>
> CRITERIA B: In the course of a federal action involving the MS4 (e.g., EPA processing request for an individual NPDES permit, issuance of a CWA section 404 wetlands dredge and fill permit, etc.), formal or informal consultation with the Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the Endangered Species Act (ESA) has been concluded and that consultation:
>
> ✓addressed the effects of the storm water discharges, allowable non-storm water discharges, and discharge-related activities on listed species and critical habitat, and
>
> ✓the consultation resulted in either a no jeopardy opinion or a written concurrence by the Services on a finding that the storm water discharges, allowable non-storm water discharges, and discharge-related activities are not likely to adversely affect listed species or critical habitat; or

CRITERIA C: The activities are authorized under section 10 of the ESA and that authorization addresses the effects of the storm water discharges, allowable non-storm water discharges, and discharge-related activities on listed species and critical habitat; or

CRITERIA D: The applicant has evaluated, using best judgement and available scientific and commercial data, the effects of the storm water discharges, allowable non-storm water discharges, and discharge-related activities on listed endangered or threatened species and critical habitat. Based on the evaluation, the permittee has determined that there is no reason to believe the discharge and discharge-related activities are likely to adversely affect any federally-listed species or result in the adverse modification or destruction of critical habitat (NOTE: This option does not provide protection against liability for any incidental takes of an endangered species); or

CRITERIA E: The storm water discharges, allowable non-storm water discharges, and discharge-related activities were already addressed in another operator's certification of eligibility under Criteria A-D which included the MS4's activities. By certifying eligibility under Criteria E, the applicant agrees to comply with any measures or controls upon which the other operator's certification was based.

The above criteria are based on and similar to the criteria and processes used in the EPA Region 8 general permit for small MS4s issued June 13, 2003 (68 FR 35408), EPA's October 30, 2000, Multi-sector General Permit for discharges of storm water associated with industrial activity (65 FR 64746), and EPA's July 1, 2003, Construction General Permit for discharges of storm water associated with construction activities (68 FR 39087). Region 6 believes these conditions are also appropriate for the small MS4 general permit. Appendix A to the proposed permit provides additional direction which must be followed by permit applicants concerning the determination of permit eligibility. Permittees must certify that they have met the eligibility requirement when they submit their notices of intent requesting coverage under the permit. Authorization to discharge commences 30 days after the NOI is postmarked unless EPA determines that the applicant did not meet the eligibility requirements.

Based on our experience, Region 6 has added a qualification to the permit and Appendix A regarding an applicant's ability to choose which eligibility criteria to use. In the ordinary case we have found that the applicant's analysis - if done in accordance with Appendix A - will be sufficient to conclude that the activities to be authorized will not result in a likely adverse effects on listed species or critical habitat. In some instances, however, where EPA or the Services have particular concerns warranting a more thorough analysis, EPA may direct an applicant to pursue eligibility only under Criteria B (formal or informal consultation with FWS) or to pursue an individual NPDES permit. For example, even in the absence of formally designated critical habitat, it may be necessary to examine the effect of habitat alteration or destruction on listed species, whether or not they were detected in the proximity of the MS4.

The term "storm water discharge-related activities" is defined in Part 7 of the permit and includes "activities which cause, contribute to, or result in storm water point source pollutant

discharges; and measures to control storm water discharges, including the siting, construction and operation of best management practices (BMPs) to control, reduce or prevent storm water pollution." Permittees must also certify that they have met this eligibility requirement when they submit their notices of intent requesting coverage under the proposed permit.

A list of listed or proposed endangered or threatened species within the geographic areas covered by the proposed permit is maintained at EPA's website at http://cfpub.epa.gov/npdes/stormwater/endangerspecies.cfm. Information on endangered and threatened species and designated critical habitat is also available directly from the U.S. Fish and Wildlife Service's website at http://ifw2es.fws.gov/endangeredspecies/lists/, which provides additional information on the species. The principal threats to these species which may be associated with the storm water discharges that would be authorized under the permits are loss or modification of habitat and materials such as pesticides and other pollutants in the discharges. The requirements of the permit are designed to both improve the quality of existing unregulated discharges and address impacts on discharges related to future municipal growth.

The activities to be implemented by Phase II MS4s are very similar to those implemented by Phase I MS4s. As such, the potential threats to listed species are also very similar. With all the conditions discussed above, Region 6 believes that the permit issuance will have no effect on listed species that has not been considered and addressed as necessary prior to a permittee receiving authorization to discharge. Region 6 has forwarded a copy of the proposed permit and fact sheet to the local offices of the Services for the geographic areas of coverage for review and comment on Region 6's conclusions concerning the effects of the proposed permit on listed species.

MS4 operators choosing to cover their construction and industrial activity storm water discharges under today's permit can only cover those discharges that meet the endangered species eligibility requirements of the Multi-Sector General Permit or Construction General permit that would otherwise be used. Documentation on how the eligibility conditions were met would need to be included in the storm water pollution prevention plan for those sites. EPA has consulted with the Services on the eligibility and permit conditions applicable to construction site discharges in the context of the Construction General Permit and Multi-Sector General Permit. Since the eligibility and discharge control conditions would be effectively the same, Region 6 believes that the effect of authorizing the MS4's industrial and/or construction storm water discharges under the MS4 permit instead of the CGP or MSGP do not result in any additional effects on threatened or endangered species or designated critical habitat.

E. Historic Preservation

The National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of Federal undertakings, including undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. The term "Federal undertaking" is defined in the existing NHPA regulations to include any project,

activity, or program under the direct or indirect jurisdiction of a Federal agency that can result in changes in the character or use of historic properties, if any such historic properties are located in the area of potential effects for that project, activity, or program. See 36 CFR 802(o). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places. See 36 CFR 802(e).

Federal undertakings include the EPA's issuance of general NPDES permits. To ensure compliance with the NHPA, the proposed permit authorizes storm water discharges only under the following circumstances:

1. The storm water discharges, and discharge related activities do not affect a property that is listed or has been reviewed and determined to be eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior; or

2. The MS4 has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) that outlines all measures that will be undertaken to mitigate or prevent adverse effects to historic properties.

The above requirements are implemented via the eligibility requirements of the proposed permit (Part 1.6.1.) which restricts permit eligibility to storm water discharges and storm water discharge-related activities which meet either of the above criteria. The above criteria are based on the criteria used in the EPA Region 8 general permit for small MS4s issued June 13, 2003 (68 FR 35408) and the EPA Region 1 general permit for small MS4s issued May 1, 2003 (65 FR 23308). The process and criteria are also similar to those in EPA's October 30, 2000, Multi-sector General Permit for discharges of storm water associated with industrial activity (65 FR 64746). Region 6 believes these conditions are also appropriate for the small MS4 general permit. Appendix B to the proposed permit (derived from the Region 1 and Region 8 general permits) provides additional direction which must be followed by permit applicants concerning the determination of permit eligibility. Permittees must certify that they have met the eligibility requirement when they submit their notices of intent requesting coverage under the permit. Authorization to discharge commences 30 days after the NOI is postmarked unless EPA determines that the applicant did not meet the eligibility requirements.

IV Summary of Permit Conditions

A. Notification Requirements

In accordance with 40 CFR 122.28(b)(2)(i), a notice of intent (NOI) must be submitted by all dischargers seeking discharge authorization under the proposed general permit.

1. Deadlines for NOIs

a. For existing MS4s in urbanized areas, the deadline for submittal of the NOI is March 10, 2003 in accordance with the Phase II regulations at 40 CFR 122.32(a)(1).
b. For existing MS4s outside urbanized areas which are designated for permitting under 40 CFR 122.32(a)(2), the deadline for submittal of the NOI is not later than 180 days after notification (unless the permitting authority provides additional time in the designation notice).
c. For new MS4s within urbanized areas which commence discharges subsequent to March 10, 2003, the NOI must be submitted not later than 30 days prior to commencing discharges.
d. For new operators of an existing MS4, the NOI must be submitted not later than two days prior to taking operational control of the MS4.

2. Contents of NOI

EPA has not developed a special NOI form for small MS4s, but has provided a suggested format in Appendix C of the permit. The required information may be provided in narrative form in a letter to the permitting authority. The following information must be provided:

a. The name of the municipal entity/tribe/state agency/federal agency, mailing address, and telephone number;
b. An indication of whether the MS4 is a Federal, State, Tribal, or other public entity;
c. The urbanized area or core municipality (if the MS4 is not located in an urbanized area) where the MS4 is located; the name of the organization, county(ies) where the MS4 is located, and the latitude and longitude of an approximate center of the MS4;
d. The name of the major receiving water(s). If there are discharges to a water with an applicable Total Maximum Daily Load, a certification that the SWMP complies with the requirements of Part 1.4.6 of the permit;
e. An indication of whether all or a portion of the MS4 is located on Indian Country lands.
f. If the MS4 is relying on another entity to satisfy one or more of the permit obligations, the identity of that entity(ies) and the element(s) they will be implementing.
g. Certification of whether the permittee has met eligibility criteria for protection of threatened or endangered species, critical habitat, and historic properties.
h. A description of the storm water management program (SWMP), including best management practices (BMPs) that will be implemented and the measurable goals for each of the storm water minimum control measures specified in Part 5.3 of this permit, the month and year in which the MS4 operator will start and fully implement each of the minimum control measures or the frequency of the action,

the name of the person(s) responsible for implementing or coordinating the SWMP, and the supporting documentation required by Parts 1.5 and 1.6.

The NOI must be signed in accordance with Part 6.7 of the proposed permit and must include the certification statement in Part 6.7.4 of the permit.

3. Where to Submit the NOI

NOIs must be submitted to EPA, Region 6 at an address that will be included in final permit. It is possible that the final permit will require copies of the NOI be provided to State or Tribal authorities, the U.S. Fish and Wildlife Service, the State and/or or Tribal Historic Preservation Officer (or similar cultural resources position).

4. Reapplication for Coverage When the General Permit Expires

The proposed general permit will expire five years from its effective date. Permittees who are granted coverage under the permit may request a continuation of coverage under a reissued general permit by submitting an NOI in accordance with the requirements of the reissued general permit.

If the permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earliest of:

a. Reissuance or replacement of the permit, at which time a new NOI must be submitted in accordance with the requirements of the reissued permit; or
b. Issuance of an individual permit for the discharges; or
c. A formal permit decision is made by the Director not to reissue the general permit, at which time dischargers must seek coverage under an alternative general permit or an individual permit.

5. Co-Permittees Under a Single NOI

As provided by NPDES regulations at 40 CFR 122.33(b)(1), Part 3.4 of the proposed permit provides that several small MS4s may jointly develop and implement a SWMP. The MS4s may also submit one NOI. However, the one NOI must include all the information described above in section IV.A.2 for each permittee. Also, if responsibilities are being shared as described below in section IV.D, the SWMP must describe which permittees are responsible for implementing each of the minimum control measures.

6. Notice of Termination

A discharger covered by the general permit must terminate coverage if any of the

following conditions are met:

a. A new operator has assumed responsibility for the MS4; or
b. The discharger has ceased operations at the MS4; or
c. The permittee is able to eliminate the storm water discharges from the MS4.

EPA has not developed a special notice of termination (NOT) form for small MS4s. As such, to terminate coverage a letter including the following information must be submitted:

a. Name, mailing address, and location of the MS4 for which the notification is submitted.
b. The name, address and telephone number of the operator addressed by the Notice of Termination;
c. The NPDES permit number for the MS4;
d. An indication of whether another operator has assumed responsibility for the MS4, the discharger has ceased operations at the MS4, or the storm water discharges have been eliminated; and
e. The following certification:

I certify under penalty of law that all storm water discharges from the identified MS4 that are authorized by an NPDES general permit have been eliminated, or that I am no longer the operator of the MS4, or that I have ceased operations at the MS4. I understand that by submitting this Notice of Termination I am no longer authorized to discharge storm water under this general permit, and that discharging pollutants in storm water to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by an NPDES permit. I also understand that the submission of this Notice of Termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

NOTs, signed in accordance with Part 6.8.2 of the permit, must be sent to EPA at an address that will be provided with final permit.

7. Effective Date of Coverage

Coverage will generally become effective 30 days after the postmark date of the NOI, unless otherwise notified by EPA during that period.

B. Storm Water Management Program (SWMP) Requirements

The proposed general permit requires that all dischargers covered by the permit develop and implement a SWMP. The SWMP is the means through which dischargers comply with the CWA's requirement to control pollutants in the discharges to the maximum extent practicable (MEP), and comply with the water quality related provisions of the CWA. EPA considers MEP to be an iterative process in which an initial SWMP is proposed and then periodically upgraded

as new BMPs are developed or new information becomes available concerning the effectiveness of existing BMPs (64 Fed. Reg. 68754). The Phase II regulations at 40 CFR 122.34 set forth the following six minimum pollution control measures to be included in SWMPs.

1. Public Education and Outreach on Storm Water Impacts.

2. Public Involvement/Participation.

3. Illicit discharge detection and elimination.

4. Construction Site Storm Water Runoff Control.

5. Post-Construction Storm Water Management in New Development and Redevelopment.

6. Pollution Prevention/Good Housekeeping for Municipal Operations.

For each minimum measure, the regulations specify certain required elements, and also guidance which provides additional information concerning what an adequate program should include. The proposed permit includes nearly verbatim the required program elements for each minimum measure. The proposed permit also includes a number of additional requirements for each minimum measure which were derived from the recommendations of the regulations. These provisions are included in the permit as requirements rather than recommendations to ensure their enforceability. Addendum C to this fact sheet provides a list of the requirements of the regulations and the guidance for each minimum measure.

Recognizing that traditional MS4s such as cities and counties, non-traditional MS4s such as flood control districts and military bases, and transportation department MS4s have inherently different scopes of authority, the SWMP requirements are modified as necessary to accommodate these different kinds of MS4s. For example, the audience for public education programs by a city would be the general public, while the audience at a military base would be base personnel (including dependents), contractors, and visitors. Where appropriate, Region 6 has included language clarifying expectations for different types of MS4 operators under the six minimum measure sections in Part 5.2 of the permit. EPA welcomes comments on ways the permit conditions can better accommodate the differences between the various types of MS4 operators.

EPA has also developed a menu of BMPs for small MS4s which is available on EPA's website at http://www.epa.gov/npdes/menuofbmps/menu.htm to assist in the development of SWMPs. The menu provides detailed descriptions of BMPs which may be included in SWMPs to satisfy the requirements of the six minimum measures. In addition, Addendum B to this fact sheet provides descriptions of program elements which have been developed by Phase I MS4s. Phase I MS4s have been under permit for up to ten years now, and have acquired considerable experience in storm water quality management. As noted earlier, the permit requirements for

Phase I MS4s are quite similar to those for Phase II MS4s. As such, Phase II MS4s may wish to contact Phase I MS4s (in their area or elsewhere) to gain additional insights from the experiences of Phase I MS4s.

C. Measurable Goals

The Phase II regulations at 40 CFR 122.34(d)(1) and the proposed general permit require that measurable goals be included with the SWMP which is submitted by small MS4s with their NOIs. The measurable goals become permit requirements once the MS4 has requested and has been granted coverage under the general permit.

Measurable goals are quantifiable measures of progress in implementing the various BMPs which comprise a SWMP. Measurable goals may consist of specific one-time only objectives such the development of a storm water ordinance by a certain date, or they may consist of numeric objectives for the frequency of implementation of a given BMP (such as the frequency of street sweeping or catch basin cleaning). Measurable goals may also consist of specific objectives for water quality improvement over a given time period.

Measurable goals must be included for each specific BMP which is proposed to be included in the SWMP. Measurable goals were included in the Phase II regulations to ensure that the public can better evaluate the level of effort proposed by MS4s in controlling pollutants in the discharges and to ensure accountability of the MS4s.

EPA has developed a measurable goals guidance which is available on EPA's website at http://www.epa.gov/npdes/stormwater/measurablegoals/index.htm. Example measurable goals are provided for each of the six minimum measures to assist MS4s in the development of their own measurable goals. Region 6 recommends that this guidance be reviewed by MS4s in developing their measurable goals.

D. Sharing Responsibility for BMP Implementation

The Phase II regulations at 40 CFR 122.35(a) recognize that one or more of the minimum measures may be implemented within a given MS4 by an entity other than the discharger (for example, a county may implement a street sweeping program in a given city within the county). As such, the regulations and Part 5.4 of the proposed permit provide that a given MS4 may rely on another entity to implement some of the required minimum measures if:

1. The other entity, in fact, implements the control measure;

2. The particular control measure, or component thereof, is at least as stringent as the corresponding requirement set forth in the permit; and

3. The other entity agrees to implement the control measure on behalf of the

particular MS4.

In the annual reports which are required under Part 5.7 of the proposed permit, the MS4 must also specify that it relies on another entity to satisfy some of its permit obligations. If a given MS4 relies on another entity for implementation of a particular BMP, the MS4 remains responsible for compliance with the permit if the other entity fails to implement the BMP. The proposed permit also requires that the MS4 provide the other entity with the reporting requirements of Part 5.7 of the permit. The other entity must then provide the annual report information for the MS4 as described in Part 5.7 of the permit.

E. Qualifying State, Tribal or Local Programs

The Phase II regulations at 40 CFR 122.34(c) recognize that State, Tribal or local programs may already exist which meet the requirements of one or more of the six minimum measures. In such a case, the regulations and Part 5.3 of the proposed permit provide that the MS4 may include the local qualifying program in the SWMP instead of developing a new program in accordance with the requirements of the minimum measure. A local qualifying program must include, at a minimum, the relevant requirements of the six minimum measures described in the regulations at 40 CFR 122.34(b).

F. Review of SWMPs by Region 6

Parts 2.1.3 and 5.5.3 of the proposed permit allow Region 6 to notify a given MS4 that the SWMP which was submitted with the NOI, or the measurable goals, do not meet one or more of the minimum requirements of the permit. A similar provision was included in EPA's general NPDES permits for storm water discharges associated with industrial activity which were discussed in section I.A above. This provision ensures that Region 6 may require upgrades or modifications to SWMPs which may be deficient or less effective than orriginally expected, and ensure that the SWMPs are adequate to meet the objectives of the general permit. Changes to SWMPs, when required, must be made within 30 days of receipt of notification or as specified by the Director in the notice to the permittee.

G. Special Conditions

1. Total Daily Maximum Load (TMDL) Allocations Established After Permit Issuance

The proposed permit (Part 4.2) provides that if a TMDL is approved for any waterbody into which the permittee discharges and if that TMDL includes a wasteload allocation for a parameter likely to be discharged by the MS4, EPA may require revisions to the SWMP to include the requirements of the TMDL and/or its associated implementation plan. Monitoring of the discharges may also be required, as appropriate, to ensure compliance with the TMDL.

The TMDL-related requirement has been included in the proposed permit in recognition

of the current activity on the part of states and territories to develop and implement TMDLs for various waterbodies. NPDES regulations at 40 CFR 122.44(d)(1)(vii) require that NPDES permits be consistent with the requirements of TMDLs.

2. Compliance with Water Quality Standards

The proposed permit (Part 4.1) requires that discharges not cause or contribute to a violation of an applicable numeric or narrative surface water quality standard. When exceedances do occur, the permit also requires that the permittee take all necessary actions to ensure that future discharges do not cause or contribute to a violation and must document the actions in the SWMP. If a violation remains or recurs, coverage under the general permit may be terminated by EPA, and EPA may require an alternative general permit or individual permit. The language in the proposed permit is similar to language in EPA's MSGP. As also discussed above in section III.E, Region 6 believes that the proposed requirements are consistent with the intent of the Phase II program as described in the preamble to the Phase II regulations.

H. Monitoring, Recordkeeping, and Reporting Requirements

1. Monitoring Requirements

The Phase II storm water regulations at 40 CFR 122.34(g) require that small MS4s evaluate program compliance, the appropriateness of the BMPs in their SWMPs and progress towards meeting their measurable goals. These requirements have been included in Part 5.6 of the proposed general permit.

In complying with these requirements, EPA is not encouraging a focus on the traditional end-of-pipe monitoring which is commonly found in most NPDES permits (64 Fed. Reg. 68769). Instead, EPA is encouraging a mix of physical, chemical, biological, or programmatic indicators such as described in Claytor and Brown (1996). In 1994, EPA co-sponsored a conference in Crested Butte, CO (ASCE, 1995) to consider storm water monitoring needs and how to obtain the most meaningful results based on limited monitoring dollars. A general conclusion from the conference was that a mix of various types of indicators should be considered when designing storm water monitoring programs.

The nature of the monitoring activities which will be implemented by permittees will largely depend on the measurable goals selected by the permittees. As discussed above in section IV.C of this fact sheet, measurable goals may be measures of the level of effort of an MS4 in implementing a given BMP (such as frequency of street sweeping), or they may be measures of water quality improvement. Region 6 believes that for the initial five-year term of the general permit, most small MS4s will opt for measurable goals which consist of a given level of effort in implementing a particular BMP. As such, the monitoring activities will largely consist of keeping track of these efforts. This information must be submitted to Region 6 in the annual report described below in section IV.H.3. If monitoring is conducted by the permittee, Part 5.6.2 of the proposed permit includes requirements related to representative monitoring, test

procedures and reporting of results.

2. Recordkeeping

In accordance with 40 CFR 122.34(g)(2), Part 5.7 of the proposed general permit requires that records required by the permit be retained by the permittee for at least three years. In addition, in accordance with these same regulations, the permit requires that the permittee make these records (including the SWMP) available to the public during regular business hours.

3. Reporting

In accordance with 40 CFR 122.34(g)(3), Part 5.8 of the proposed general permit requires the submittal of an annual report to the permitting authority. The following information is required:

a. The status of compliance with permit conditions, an assessment of the appropriateness of the identified best management practices and progress towards achieving the identified measurable goals for each of the minimum control measures;
b. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
c. A summary of the storm water activities which are planned during the next reporting cycle;
d. A change in any identified measurable goals that apply to the program elements;
e. Description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable TMDLs; and
f. Notice that the permittee is relying on another governmental entity to satisfy some of the permit obligations (if applicable).

The first report is due June 30, 2004, covering the activities of the permittee during the period beginning on the effective date of the permit for the permittee and ending March 10, 2004. Subsequent annual reports are due on June 30 of each year following 2004 during the remainder of the term of the permit.

I. Permit Conditions Applicable to Specific States or Indian Country Lands

Part 8 of the proposed general permit is reserved for any special conditions which may be required in accordance with the State or Tribal CWA section 401 certification process.

V. Cost Estimates For Common Permit Requirements

Cost estimates for implementing the requirements of the proposed general permit for small MS4s were developed by EPA as part of the development of the Phase II regulations. This

information can be found at 64 Fed. Reg. 68791 and is not being repeated here.

VI. Permit Appeal Procedures

Within 120 days following notice of EPA's final decision for the general permit under 40 CFR 124.15, any interested person may appeal the permit in the Federal Court of Appeals in accordance with Section 509(b)(1) of the CWA. Persons affected by a general permit may not challenge the conditions of a general permit as a right in further Agency proceedings. They may instead either challenge the general permit in court, or apply for an individual permit as specified at 40 CFR 122.21 (and authorized at 40 CFR 122.28), and then petition the Environmental Appeals Board to review any condition of the individual permit (40 CFR 124.19 as modified on May 15, 2000, 65 Fed. Reg. 30886).

Addendum A.References

ASCE. 1995. Harry C. Torno, Editor, Stormwater NPDES Related Monitoring Needs, Proceedings of an Engineering Foundation Conference.

Center for Watershed Protection. 1996. Environmental Indicators to Assess Stormwater Control Programs and Practices, Final Report, July, 1996.

EPA. 1983. Results of the Nationwide Urban Runoff Program, Final Report, Water Planning Division.

EPA. 1990. "National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges; Final Rule," 55 FR 47990, November 16, 1990.

EPA. 1992. Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems, EPA 833-B-92-002, November, 1992.

EPA. 1994. Clinton's Clean Water Initiative, EPA 800-R-94-001, February 1, 1994.

EPA. 1995. Storm Water Discharges Potentially Addressed by Phase II of the National Pollutant Discharge Elimination System Storm Water Program, EPA 833-K-94-002, March, 1995.

EPA. 1996. "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits," EPA-833-D-96-00, August 1, 1996.

EPA. 1999. "National Pollutant Discharge Elimination System - Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges," 64 FR 68722, December 8, 1999.

EPA. 2000. National Water Quality Inventory: 1998 Report to Congress, EPA 841-R-00-001, June, 2000.

EPA. 2000. "Final Issuance of National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities; Notice," 65 FR 64746, October 30, 2003.

EPA. 2002. "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs," Memorandum, November 22, 2002.

EPA. 2003. "Notice of Final Issuance of a National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems in the States of Massachusetts and New Hampshire and Indian Lands in the States of Connecticut, Massachusetts, and Rhode Island and Federal Facilities in Vermont," 68 FR 23308, May 1, 2003.

EPA. 2003. "Public Notice of Final National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges From Federal Facility Small Municipal Separate Storm Sewer Systems (MS4s) in Colorado," 68 FR 35408, June 13, 2003.

EPA. 2003. "Final National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activities," 68 FR 39087, July 1, 2003.

Addendum B. Regulatory Requirements and Guidance for SWMPs for Phase II MS4s

The six minimum control measures for SWMPs are listed below, broken down into the required components, and the guidance from the Phase II regulations (40 CFR 122.34). Additional guidance and information on municipal storm water programs, Best Management Practices (BMPs), model ordinances, and measurable goals is available online via links on the Region 6 MS4 page at http://www.epa.gov/region6/6wq/npdes/sw/ms4/index.htm.

1. Public Education and Outreach on Storm Water Impacts.

a. SWMP Must Include:

(1) implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

b. EPA Guidance on Public Education and Outreach:

(1) use storm water educational materials provided by your State, Tribe, EPA, environmental, public interest or trade organizations, or other MS4s;
(2) inform individuals and households about the steps they can take to reduce storm water pollution, such as ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil or household hazardous wastes;
(3) inform individuals and groups how to become involved in local stream and beach restoration activities as well as activities that are coordinated by youth service and conservation corps or other citizen groups;
(4) tailor the program, using a mix of locally appropriate strategies, to target specific audiences and communities. Program should target some of the materials or outreach programs to be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant storm water impacts. For example, providing information to restaurants on the impact of grease clogging storm drains and to garages on the impact of oil discharges;
(5) tailor the outreach program to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children.

2. Public Involvement/Participation.

a. SWMP Must Include:

(1) at a minimum, comply with State, Tribal and local public notice requirements when

implementing a public involvement/participation program.

b. EPA Guidance:

(1) include the public in developing, implementing, and reviewing your storm water management program and should make efforts to reach out and engage all economic and ethnic groups. Opportunities for members of the public to participate in program development and implementation include serving as citizen representatives on a local storm water management panel, attending public hearings, working as citizen volunteers to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts. (Citizens should obtain approval where necessary for lawful access to monitoring sites.)

3. Illicit discharge detection and elimination.

a. SWMP Must Include:

(1) develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at 40 CFR 122.26(b)(2)) into the small MS4;
(2) develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;
(3) to the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the storm sewer system and implement appropriate enforcement procedures and actions;
(4) develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the system;
(5) inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste; and
(6) address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if they are identified by the MS4 as significant contributors of pollutants to the small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States).

It should also be noted that the fire fighting activities referred to above, from which discharges need not necessarily be prohibited, are emergency situations only and do not include

non-emergency situations such as fire fighting training activities.

b. EPA Guidance:

(1) ensure that the plan to detect and address illicit discharges include the following four components: procedures for locating priority areas likely to have illicit discharges; procedures for tracing the source of an illicit discharge; procedures for removing the source of the discharge; and procedures for program evaluation and assessment.
(2) conduct visual screening of the outfalls during dry weather and conduct field tests of selected pollutants as part of the procedures for locating priority areas.

4. Construction Site Storm Water Runoff Control.

a. SWMP Must Include:

(1) develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If the NPDES permitting authority waives requirements for storm water discharges associated with small construction activity in accordance with 40 CFR 122.26(b)(15)(i), the MS4 is not required to develop, implement, and/or enforce a program to reduce pollutant discharges from such sites.

The program must include the development and implementation of, at a minimum:

(a) an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law;
(b) requirements for construction site operators to implement appropriate erosion and sediment control best management practices;
(c) requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
(d) procedures for site plan review which incorporate consideration of potential water quality impacts;
(e) procedures for receipt and consideration of information submitted by the public; and
(f) procedures for site inspection and enforcement of control measures.

b. EPA Guidance:

(1) consider as examples ensure compliance - non-monetary penalties, fines, bonding requirements and/or permit denials for non-compliance;

(2) include procedures for site plan review including the review of individual pre-construction site plans to ensure consistency with local sediment and erosion control requirements;
(3) include procedures for site inspections and enforcement of control measures including steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and
(4) provide educational and training measures for construction site operators, including requiring a storm water pollution prevention plan for construction sites within the jurisdiction that discharge into the system.

5. Post-Construction Storm Water Management in New Development and Redevelopment.

a. SWMP Must Include:

(1) develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the small MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts;
(2) develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for the community; and
(3) use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law; and
(4) ensure adequate long-term operation and maintenance of BMPs.

b. EPA Guidance:

(1) ensure that the BMPs chosen are appropriate for the local community; minimize water quality impacts; and attempt to maintain pre-development runoff conditions;
(2) in choosing appropriate BMPs, participate in locally-based watershed planning efforts which attempt to involve a diverse group of stakeholders including interested citizens. When developing a program that is consistent with this measure's intent, EPA recommends that the MS4 adopt a planning process that identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures;
(3) in developing your program, consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality. In addition to assessing these existing documents and programs, the MS4 should provide opportunities to the public to participate in the development of the program;

(4) ensure the appropriate implementation of the structural BMPs by considering some or all of the following: re-construction review of BMP designs; inspections during construction to verify BMPs are built as designed; post-construction inspection and maintenance of BMPs; and penalty provisions for the noncompliance with design, construction or operation and maintenance; and
(5) ensure that the requirements be responsive to the constantly changing storm water technologies, developments or improvements in control technologies.

6. Pollution Prevention/Good Housekeeping for Municipal Operations.

a. SWMP Must Include:

(1) develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and
(2) using training materials that are available from EPA, your State, Tribe, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

b. EPA Guidance:

(1) at a minimum, consider the following in developing the program:

(a) maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural storm water controls to reduce floatables and other pollutants discharged from the separate storm sewers;
(b) controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by the MS4, and waste transfer stations;
(c) procedures for properly disposing of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris); and
(d) ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices; and

(2) include operation and maintenance as an integral component of all storm water management programs. This measure is intended to improve the efficiency of these programs and require new programs where necessary.

Addendum C.Example SWMP Components from Phase I MS4s

Minimum Measure #1

Storm Drain Stenciling Program
The City of Monterey CA put together a storm drain stenciling kit that could be used by volunteers stenciling storm drains. The kit included stencils, traffic cones, trash bags, paint and paint rollers, buckets, latex gloves, orange vests, and wet paint signs. Instructions on stenciling were also provided. Volunteers were asked to mark the storm drains they had stenciled on city maps, as well as provide any locations of storm drains that were not on city maps. For further information contact Jennifer Hays, Public Works Engineering Division (408) 646-3920. Source: Model Urban Runoff Program, Appendix 3C.

Enviroscape Model
The cities of Monterey and Santa Cruz, CA used a 3-dimensional plastic model of a miniature city to offer a hands-on approach to demonstrate water pollution of watersheds caused by various urban runoff sources. Participants sprinkle cocoa and colored drink mixes to simulate oil, paint, herbicides and pesticides. Participants then spray water on to the site to simulate rainfall. The model was taken to schools and city events to educate and elicit support from the community. Model Available from Terrene Institute (202) 833-8317. Source: Model Urban Runoff Program, Appendix 3D.

City of Miami Beach, Florida MS4 Storm Water Permit - 9/30/93
As a public awareness and education program, the city shall:

- *publicize and promote public awareness of the hazards of illicit dumping to the storm sewer system, through newspaper articles, pamphlets and bill inserts.*
- *establish and publicize a dedicated phone number to inform the public of the nearest locations for dumping used oil and hazardous household waste, and to report illegal dumping to the storm sewer system.*
- *initiate sewer stenciling program*
- *provide used oil collection sites and post these locations at the local oil retailers.*

Baltimore County, MS MS4 Storm Water Permit - 3/30/95
Within 1 year, the permittee shall begin implementing its pilot educational program for the control of storm water pollutants. Components of the educational program shall include the development of informational materials and brochures; presentation packets for distribution to schools, businesses, and homeowners; and surveys for gauging program effectiveness. Topics covered shall include the identification and reporting of illicit connections, proper disposal of household toxic waste, and volunteer opportunities for conducting stream surveys and cleanups. In year 2 the permittee shall perform an assessment of its educational programs and propose a schedule for expanding successful components to the entire county.

Portland, OR MS4 Storm Water Phase I Case Study
Portland has developed a program that regularly monitors storm water outfalls for pollution discharges, which has effectively halted illicit pollutant discharges, and is helping to prevent

new pollutant discharges. In addition, with a 60 percent voter approval, Portland has established a $135.6 million bond measure to acquire up to 6,000 acres of land area to better manage sensitive watersheds and secure better protection of urban waterways. Portland's industrial permit inspection program has seen storm water violations decrease from 30 to 23 percent since their permit was issued in 1995, and compliance with storm water pollution control plans has more than doubled from 41 percent to 87 percent.

Minneapolis, MN MS4 Storm Water Phase I Case Study
Minneapolis has demonstrated that outreach efforts can be correlated to reductions in pollutants; pesticide concentrations in storm water can be reduced through public outreach efforts. Pollutant concentrations of pesticides monitored in a Minneapolis lake dropped between 59 and 86 percent depending on the pesticide evaluated due to the outreach effort. Minneapolis's outreach effort is similar to that of many Phase I cities (e.g., San Francisco) that recognize the benefit of education and reeducation of the public about their role in protecting storm water quality. Frequently, the effectiveness of public outreach is measured in terms of changes in public awareness and behavior, but the Minneapolis case study demonstrates water quality improvement does occur as a result of public outreach efforts, a common feature in the storm water programs operated by Phase I permittees.

Sacramento, CA MS4 Phase I Storm Water Case Study
Outreach/education efforts of Phase I jurisdictions also focus on businesses that produce high volumes of liquid wastes with the potential to pollute storm water (e.g., automotive cleaning operations/car lots, carpet cleaners). In Sacramento, CA, a Phase I MS4 permittee, an innovative program has been introduced to reduce wash water discharges from carpet cleaning businesses. Through a "Clean Business" certification program, businesses get credit for correct disposal of wash water, home-owners have a chance of winning prizes through a lottery, and wash water is treated fully at the wastewater treatment plant. While thousands of gallons of wash water are now successfully treated, monitoring to measure the change in local water quality resulting from the business outreach effort have not been funded.

2. *Minimum Measure #2*

Public presentations
Conducting public presentations with city councils and municipal staff is a valuable way to approach the development of storm water management programs. To accomplish this aim, it is useful to have a 'stock presentation,' which describes current problems, including drainage deficiencies and water quality contaminants of concern. In addition, potential funding issues, possible solutions, and the NPDES regulatory background should be addressed in the presentation. In short, the objective of the presentation is to inform the community of the need for a storm water management program. This presentation can then used for neighborhood groups, businesses, commercial property owners and local service clubs. For a sample municipal Storm Water Management Program Presentation Outline, see Model Urban Runoff Program, Appendix 3A.

Community Clean Up

The City of Tulsa, Oklahoma, created a floatables-reduction program that utilized education and community participation. 'Operation Cleansweep' brought citizens together to clean up designated basins, pick up roadside trash, and remove obstructions from channels. For further information contact Scott Van Loo, Environmental Compliance Specialist, Public Works Department, Tulsa, OK, (918) 591-4379. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

County of Riverside, Santa Ana CA MS4 Storm Water Permit - 3/8/96
The regional board recognizes the significance of Riverside County's Storm Water/ Cleanwater Protection program and will conduct, participate, and/or assist with at least one workshop every year during the term of this permit to promote and discuss the progress of the storm water management program. The details of the annual workshop will be published in local newspapers and mailed to interested parties.

City of Milwaukee, WI Storm Water Permit - 10/21/94
A program to promote the management of stream banks and shorelines by riparian land owners to minimize erosion and restore or enhance the ecological values of the waterway.

City of Monterey, CA MS4 Storm Water Phase II Community Case Study
In the city of Monterey, CA, a Phase II community, grass-roots efforts have assisted in identifying and implementing the necessary storm water management controls to protect the Monterey Bay National Marine Sanctuary in California, one of the most diverse marine environments in the United States. In particular, volunteers contribute, on average, an estimated 1,500 annual hours to monitor for unacceptable dry weather discharges for MS4s. The efforts of the volunteers have significantly reduced the amount of pollutants entering the estuary.

Sacramento, CA MS4 Storm Water Case Study
In Sacramento, CA an innovative program has been introduced to reduce wash water discharges from carpet cleaning businesses. Through a "Clean Business" certification program, businesses get credit for correct disposal of wash water, home-owners have a chance of winning prizes through a lottery, and wash water is treated fully at the wastewater treatment plant. While thousands of gallons of wash water are now successfully treated, monitoring to measure the change in local water quality resulting from the business outreach effort have not been funded.

3. *Minimum Measure #3*

Identifying and Detecting Illicit Discharges with Volunteers
In 1998, the Alabama Water Watch Association and the Birmingham Storm water Management Authority forged a partnership to train volunteers to help identify and detect illicit discharges by monitoring the city's 158 critical screening sites and outfalls. For further information contact Allison Newell, Alabama Water Watch Association, (888) 844-4785. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

Illicit Connections and Fluorescent Dye

Washtenaw County, MI, initiated a program whose focus was eliminating illicit connections and discharges to the storm drain system. Crews visited industrial, commercial, and residential properties and asked permission to flush fluorescent dye through toilets or drains, then monitored nearby sanitary drain lines and storm drain lines to see where the dye had gone. Over 95 percent of the facilities contacted for dye testing cooperated. If inspectors found an illicit connection to the storm drains, the owner of the manager of the building was notified and informed of potential remedies. Recommended remedies were often very simple, such as sealing an unused floor drain. If after three letters the problem was not fixed, the program refers the site to the relevant municipality for possible enforcement action under the municipality's building code. For further information contact Janice Bobrin, Drain Commissioner, Washtenaw County, MI, (734) 994-2525. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

Reporting Illicit Discharges

The Alameda Countywide Clean Water Program developed forms for use by inspectors during inspections of dry-weather flows. This information could then be incorporated into an Illicit Discharge Inspection Quarterly Summary Report. The number of cases of illicit discharges detected, eliminated, or status taken towards elimination are documented on the form. For further information contact Robert Hale, Alameda County Countywide Clean Water Program, Alameda County Public Works, (510) 670-5543. Source: Model Urban Runoff Program, Appendix 3I.

Collection/Recycling

The City of Tulsa, Oklahoma, organized free dump days at the landfill and the collection/recycling of used motor vehicle fluids and household hazardous wastes. The efforts were coordinated with the Metropolitan Environmental Trust, an organization that operates recycling depots around the city. To increase participation, the city sponsored two collection days each year. Participants also received education material on the importance of recycling and using environmentally friendly alternatives to hazardous household chemicals. At the same time, other community programs focused on this issue included an environmental summit for middle and high school students and a program that involves area business through clean ups, recycling, and donations. For further information contact Scott Van Loo, Environmental Compliance Specialist, Public Works Department, Tulsa, OK, (918) 591-4379. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

City of Philadelphia, PA MS4 Storm Water Permit - 9/29/95

Illicit discharge prevention: During construction/reconstruction of sewers, the city will color code the sanitary 5" and storm 6" laterals to assist plumbing contractors with making proper connections. City inspectors shall verify that proper connections to sanitary and storm sewers have been made. The city shall require a certification of proper connections by the contractor, with a copy of the certification given to the homeowner.

Baltimore County, MD MS4 Storm Water Permit - 3/30/95

Within 6 months, the permittee shall begin implementing its illicit detection program as a pilot study and screen a minimum of 50 outfalls within the year. Within the next year, the permittee shall complete its Manual of Practice for Detection and Removal of Illicit Connections which shall include a detailed description of procedures for the investigation of illicit connections and

enforcement. Additionally, the illicit detection program shall be expanded to screen at least 200 outfalls per year.

Charles River, MA Watershed Case Study (Boston, MA MS4 Phase I Storm Water Program)
The successes in the Charles River watershed in Massachusetts demonstrates how storm sewer inspections/dry-weather monitoring has resulted in a quantifiable reduction in pollutant discharge through the storm sewer system. Boston, MA, a Phase I permittee, is a major participant in a multi-jurisdictional effort to improve water quality in the Charles River. As required by its Phase I MS4 storm water permit, Boston is inspecting its storm sewer system for cross-connections (i.e. points were sanitary sewers incorrectly discharge into storm water sewers). As a result, Boston has identified a number of cross-connections, the largest of which discharged raw sewage into the storm drain system at an average rate of 70,000 gallons per day. At this flow rate, this sewer pipe annually discharged 650,000 pounds of biochemical oxygen demand (BOD) and significant numbers of bacteria into waterways where swimming and boating opportunities have been limited by bacteria. Because of Boston's efforts and the efforts of other upstream municipalities, dry-weather water quality has improved, as has the opportunity for secondary-contact recreation.

Dover, NH MS4 (potential Phase II) Storm Water Case Study
Dover, NH, a potential Phase II MS4 jurisdiction, has demonstrated how an aggressive illicit connection identification and elimination program can restore water quality degradation caused by sanitary sewer cross-connections to the storm sewer system. Once a single storm sewer pipe with cross-connections to the MS4 were removed and repaired, the water quality of discharges from that storm sewer improved by over 99 percent based on measured enterococci bacteria. (National SW Awards materials)

4. *Minimum Measure #4*

Guidance Brochures
The cities of Fairfield and Suisun City (CA) developed a guidance brochure, which was targeted to the development/construction community. It details storm water controls for small construction sites (less than 5 acres). The material also provides information about why storm water controls are needed and how construction activities affect storm water quality. Furthermore, the brochure includes information about plan requirements: general site information; site topography with map; sediment control practices; housekeeping practices; and materials management practices. For further information contact Fairfield-Suisun Urban Runoff Management Program (707) 429-8930.Source: Model Urban Runoff Program, Appendix 3O.

Educating Contractors

The city of Chattanooga, Tennessee, developed an erosion control education program. Although on-site training sessions were initially conducted for contractors, the city found the most success with the development of the Erosion Control School. Both private sector and city government personnel involved in land development may sign up for the Erosion Control School, which is co-sponsored by the city and the Chattanooga Home Builders' Association. In a free four-hour session, the attendees learn the city's erosion control requirements, as well as cost-effective ways to meet those requirements. Tests before and after the course measure learning and those who pass the second test receive a certification card. For further information contact Douglas Fritz, Water Quality Supervisor, Tennessee Department of Public Works, (423) 757-0013. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

Enforcement

Active enforcement of local requirements is a cornerstone of the construction runoff program for the Garland, Texas. Inspectors visit each construction site at least monthly, with some higher-priority sites receiving more frequent visits. The program uses stop-work orders (rather than citations) to get developers to correct violations such as faulty, or nonexistent, structural or source controls. Site operators were found to make corrections within 24 hours. In addition, EPA Region 6 in Dallas has assisted Garland and other cities in the region with enforcement activities of more severe violations. For further information contact Philip Welsch, Storm Water Coordinator, City of Garland, TX, (972) 205-2189. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

Bal Harbour Village, FL MS4 Storm Water Permit - 9/30/93

The permittee will amend its land development regulations to require that applicants submit specific plans for local erosion and sediment control for the development of the site. Such plans will be a combination of notes (statements) and specifically noted locations on the plan sheets. These plans will be reveiwed and subject to approval simultaneously with other plan materials required by the permittee.

City of Miami Beach, FL MS4 Storm Water Permit - 9/30/93

A procedure for educating contractors and developers is being reviewed, where the contractor will go through a checklist and sign for the items that will be adopted to minimize site runoff. This list when approved at the processing stage shall become part of the issued building permit and thus be subject to regular building inspections. Building sites over 50,000 square feet shall be required to submit a site plan in addition to the above showing control measures during the various phases of construction. Some of the measures included in the checklist shall be:

- Availability of on site detention control for holding concrete truck and miscellaneous washing runoffs.

- Perimeter barrier fence with reverse slope access way to contain storm runoff

- Use of containers to confine solid waste and construction debris.

Nashville, TN MS4 Storm Water Permit - 4/3/96

The permittee shall improve its construction site inspection and enforcement procedures by carrying out the following:

i) to hire and train three additional construction inspectors (12 months)

ii) to update the inspector's checklist to meet the state's general permit (12 months).

iii)to establish an electronic database of construction sites to enable tracking of inspections, complaints, violations, and follow-up (12 months);

iv) to purchase 4 vehicles and associated equipment for inspectors

v) to conduct annual training workshop for construction inspectors.

vi) to modify existing ordinances to set up greater penalties (12 months),

vii) to gain greater priority in the environmental court for violations at construction sites (24 months).

5. *Minimum Measure #5*

Soil Erosion and Storm Water Runoff Control Ordinance

In 1991, Grand Traverse County, Michigan, adopted an ordinance requiring on-site retention for all commercial developments and new subdivisions. The county developed the ordinance in cooperation with the community through open workshops, hearings, and a citizens' advisory committee. The ordinance requires soil erosion and storm water runoff control permits at sites greater than 1 acre or within 500 feet of a lake or stream. For further information contact, Maureen Kennedy Templeton, Drain Commissioner, Grand Traverse County, MI (616) 922-4731. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

Development Planning

As part of the approval process for new development, the City of Pittsburg (CA) has standard conditions for all new businesses. In this manner, the city can direct development to protect water quality. Requirements for trash enclosures and drainage from paved surfaces are among the standard conditions listed. Standard conditions may not apply to each specific project; therefore, each project is reviewed individually with a Community Development staff person at the time of application. For further information contact Community Development Department, City of Pittsburg, (510) 439-4920. Source: Model Urban Runoff Program, Appendix 3U.

Storm Infiltration Project

The City of Maplewood, Minnesota, initiated a storm water infiltration project in 1995. The project utilizes a swale system rather than a traditional curb and gutter system to manage runoff. Residents choose how they want to plant the swales with native, water-loving species. High assessments on homes for curb and gutter improvements were avoided with this approach. For further information contact Ken Haider, City Engineer, Maplewood, MN, (612) 770-4550; Cliff Archenger, Ramsey Washington Watershed District, (617) 777-3665. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

Urban Watershed Retrofit Program

In Austin, Texas, private developers can choose to make a payment to the city based on the amount of new impervious cover instead of installing on-site water-quality controls. The ordinance fee, along with monthly drainage utility fees, generates funds for retrofitting performed by the city. The city has used this process to produce a series of interconnected wet ponds for pollutant reduction from storm water. For further information contact Leila Gosselink, Project Administrator, City of Austin

Watershed Protection Department, TX, 512-499-1863. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

Nashville, TN MS4 Storm Water Permit - 4/3/96

The permittee shall require, in areas of new development and significant redevelopment, installation of urban storm water BMP's. In particular the permittee shall:

i) establish design criteria for wet and extended dry detention ponds and define the conditions when such ponds shall be installed; Due 1 year from permit date

ii) collect influent and effluent data on at least three of the newly installed ponds (24-48 months from permit date);

iii) report yearly on the performance of these ponds (3rd, 4th, and 5th annual reports)

iv) define "significant redevelopment" and establish criteria for installing water quality control systems in redevelopment.

Nashville, TN MS4 Storm Water Permit - 4/3/96

The permittee shall define its master planning effort (within 12 months) by investigating the following matters and setting forth a strategy to address each matter:

i) changes to laws, ordinances, rules, etc.

ii) educating and involving the city council and planning and zoning boards

iii) design criteria for new development, including restrictions on impervious area; use of pervious paving material; source treatment, flow attenuation and infiltration devices; locating local and regional detention basins; provisions for recharge of groundwater; and restrictions for development in steeply sloped areas.

iv) changes to administrative procedures; and

v) education of land developers

Prince George's County, MD Phase I MS4 Community (Permit and Case Study)

All new developments [in the County] are required to treat the first ½ inch of runoff from their site as well as the 2, 10, and 100 year storm events. Although the Storm water Ordinance allows for waivers of on-site controls, rarely, if ever, are water quality-related (first ½ inch) controls waived. Quantity controls are only waived when there is no possible threat of structural flooding. The typical structural water quality control devices used for all types of development include: infiltration trenches, retention and detention basins, oil/grit separators, vegetative filters, and buffers. (Prince George's County, MD, Storm Water Management Program requirements under their Phase I MS4 permit)

Prince George's County, MD, has evolved into a leader of information management/analysis as a way to provide better storm water management. The county conducts ongoing, multi-year assessments of storm water runoff, which has lead to improved land development techniques, creating a new site design process to control storm water runoff, referred to as low impact development (LID). The principle goal of LID is to provide the maximum protection to the existing stream ecology by maintaining the watershed's pre-developed hydrologic regime (a decrease in runoff generation between 75- and 95-percent from current land development designs). LID allows the site planner/developer to use a wide array of simple, cost-effective techniques that focus on site-level hydrologic control. Several other Phase I municipalities are actively following the development of

LID techniques (e.g., Portland, OR), to help shape their future storm water management efforts. Decreased pollutant concentrations in a water body are not the only measurable benefit that the LID approach addresses. Additional benefit to the environment ensues because of problems avoided. Changes in development techniques and patterns that decrease percent imperviousness and combined with BMPs that infiltrate storm water runoff from new developments mean local streams will retain their current natural condition. Where implemented appropriately, LID designs should be able to yield a pollutant load reduction simply because less runoff occurs. (from Case Study)

Austin, TX MS4 Storm Water Case Study(Assessment of Controls)

In Austin, TX, a Phase I MS4, a joint public/private enterprise between the state of Texas and a private developer is installing storm water detention ponds to minimize the impacts of a mixed-use development while providing aesthetic and economic benefits. The resulting pollutant load reduction for the detention ponds has been estimated based on local rainfall patterns, design parameters used in the pond, and removal efficiencies typical of detention ponds. Compared to an unmanaged condition, the ponds will reduce the sediment discharged annually from the site by several tons and reduce nutrients discharged between 44 and 65 percent.

6. *Minimum Measure #6*

Floatable Removal

The City of Cocoa Beach, Florida, developed an insert for catch basins that makes floatable removal more effective and easy. Twice per month, storm water crews inspect and clean as necessary all 760 storm water drains in Cocoa Beach. Sediment-clogged storm lines are cleaned on a schedule using a truck with a jet hose and vacuum. For further information contact City of Cocoa Beach, Florida, Storm water Department, (407) 868-3292. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

Smart Salting Program

The Vermont Agency of Transportation developed a Smart Salting Program, based on the following principle—" the warmer the roadbed, the less salt is needed to clear snow and ice." Normally, those applying salt to roads measure temperature using a standard outdoor thermometer held or suspended at chest or eye level. However, the temperature of the roadbed is often several degrees warmer than the air temperature, especially if the sun is shining. Application rates calculated from temperatures measured by wall-mounted thermometers can therefore exceed the amount actually necessary. The Vermont Agency of Transportation installed infrared sensors on the bottoms of snowplows, which measure the temperature of the roadway as trucks pass over, allowing more accurate calculations of the required salt needed. The program has been expanded statewide, where the average reduction in salt usage is 28%. For further information contact Milan Lawson, Special Assistant to the Secretary, Vermont Agency of Transportation, (802) 828-5696. Source: NRDC, Storm Water Strategies Community Responses to Runoff Pollution, May 1999.

Park Design to Reduce Pesticide and Fertilizer Use

The Howard County (MD) Parks and Recreation Department found that wildflower meadows were twenty times less expensive to maintain than conventional turf grass. This strategy also reduces the amount of pesticides and fertilizers applied to county grounds. They are currently incorporating the strategy into new parks as they are being developed. For further information contact Mark Rabb, Howard County Parks and Recreation Department, MD, (410) 313-4730.

Municipal Maintenance

The Alameda Clean Water Program provides an example of a pollution prevention plan for a fleet maintenance facility. The plan requires the following: a pollution prevention team, site map, list of significant materials, description of potential pollutants, and assessment of potential pollutant sources, and storm water BMPs. For further information contact Robert Hale, Alameda County Countywide Clean Water Program, Alameda County Public Works, (510) 670-5543. Source: Model Urban Runoff Program, Appendix 3L.

City of Philadelphia, PA MS4 Storm Water Permit - 9/29/95

The city will work to reduce the amount of salt used for deicing practices, consistent with its comprehensive snow emergency management procedures. The city will provide temporary cover and/or berms at the three uncovered storage piles during the first year of permit issuance. Permanent structures will be constructed within three years of permit issuance.

Denver, CO MS4 Storm Water Permit - 5/10/96

Denver will assess and minimize the impacts on water quality of receiving waters from any flood management projects that it undertakes . At the time when substantial maintenance or rehabilitation work is planned, Denver will also evaluate the feasibility of retro-fitting existing structural flood control devices to provide additional pollutant removal from storm water.

Baltimore County, MD MS4 Storm Water Permit - 3/30/95

Baltimore County shall conduct maintenance inspections of all storm water management facilities at least once every three years.

Prince Georges County, MD Storm Water Permit - 11/17/93

Within 3 years, the permittee shall perform an assessment regarding the effects of road maintenance activities including street sweeping, litter control, deicing procedures, and the application of herbicides for vegetation control on storm water discharges. This assessment shall include an analysis alternative practices for reducing pollutants associated with road maintenance activities. Within those three years, the permittee shall incorporate effective alternative practices in its road maintenance procedures for reducing pollutants.

Palo Alto, CA MS4 Phase I Storm Water Permit

In Palo Alto, CA, a Phase I MS4 permittee, pollution prevention planning and engineering resulted in a decrease in pollutant concentrations originating from public utility yards. Concentrations of metals in storm water runoff decrease significantly with BMP employment and regular monitoring has demonstrated that improvements in storm water quality have been sustained over several years.

Addendum D. Criteria for Review of Small MS4s For Designation Under 40 CFR 123.35(b)(2)

This addendum outlines both the criteria and the process that the U.S. Environmental Protection Agency (EPA) Region 6 is using to designate Municipal Separate Storm Sewer Systems (MS4s) for inclusion in the National Pollutant Discharge Elimination System (NPDES) storm water permitting program. These criteria apply to certain small MS4s that are located outside of U.S. Census Bureau-defined Urbanized Areas (UAs) in the 2000 Census and reflect criteria and guidance published by EPA in the December 9, 1999, NPDES Storm Water Phase II rule at 40 CFR 123.35(b)(1).

EPA Region 6 is the NPDES permitting authority for small MS4s in the state of New Mexico and on Indian Country lands within the states Louisiana, New Mexico, Oklahoma, and Texas. According to 2000 Census information, candidate small MS4s in areas under EPA Region 6 jurisdiction are all located within New Mexico. These following designation criteria are being used to evaluate candidate MS4s (and any other small MS4 designations done by EPA Region 6 in accordance with 40 CFR 123.35(b)).

A glossary of terms is included at the end of this document.

Introduction

EPA published the NPDES Storm Water "Phase II" Final Rule on December 8, 1999 (64 FR 68722). One component of this rule applies to operators of small MS4s with discharges entering surface waters of the United States.

There are three ways by which a small MS4 may be designated as a "regulated small MS4" that requires permit coverage:

- small MS4s located within the boundaries of a Census Bureau-defined UA (based on the latest decennial census) are automatically designated;
- small MS4s that are located outside of UAs serving jurisdictions with a population of at least 10,0000 and with a population density of at least 1,000 people per square mile and which meet certain designation criteria, are to be designated by the permitting authority;
- small MS4s outside of UA that contribute substantially to pollutant loadings of a physically interconnected MS4 regulated by the NPDES storm water program are to be designated.

This document outlines the designation criteria and process EPA Region 6 is using to determine whether specific small MS4s will be designated as "regulated small MS4s.".

A. Designation Criteria

EPA Region 6 must consider whether storm water discharges from a small MS4 results, or potentially results, in exceedances of water quality standards, including impairment of designated

uses, and/or adverse habitat or biological impacts. EPA Region 6 is using the following seven criteria as the basis for evaluating MS4s within its jurisdiction that have a Year 2000 Census population greater than 10,000 people, and a density of more than 1,000 people per square mile. These criteria are based on recommendations made by EPA in the Phase II rule and are intended to evaluate the potential or actual water quality impacts from storm water discharges originating within highly populated areas.

1) Does the MS4 discharge storm water to sensitive waters?
"Sensitive waters" generally include public drinking water intakes and their designated protection areas; swimming beaches and waters in which swimming occurs; shellfish beds; state-designated Outstanding Resource Waters; National Marine Sanctuaries; waters within Federal, State and local parks; and waters containing threatened or endangered species and their habitat. Discharges of storm water to sole-source aquifers will be considered by EPA Region 6 on a case-by-case basis.

2) Is the MS4 a significant contributor of pollutants to waters of the United States?
A municipal storm water discharge that has been identified as a "contributing source of pollutants" to a Clean Water Act section 303(d)-listed waterway will be considered a significant contributor of pollutants for purposes of designation decisions. A storm water discharger that is required to reduce loading through an EPA-approved Total Maximum Daily Load (TMDL) analysis shall also be considered a significant contributor of pollutants to waters of the United States.

3) Is the MS4 densely populated?
Population density is related to the level of human activity, and has been shown to be directly linked to total impervious land surfaces; impervious surfaces are directly related to pollutant loadings from storm water runoff. EPA is also taking into consideration whether or not the MS4 serves a larger seasonal or commuter population.

4) Has the MS4 experienced high population growth over the last 10 years?
High population growth or growth potential means the local residential population has grown by 10% or more, based upon the latest Census Bureau information. A discussion on selection of 10% as a high growth rate outside urbanized areas was included in the proposed Phase II regulations published January 9, 1998 (63 FR 1561).

5) Is the MS4 contiguously located to an Urbanized Area?
Jurisdictions that are directly adjacent to a U.S. Census Bureau-defined Urbanized Area will be considered to have potential impacts on a neighboring regulated municipality.

6) Is the MS4 physically interconnected to another MS4?
As required by 40 CFR 123.35 (b)(4), an MS4 located outside a UA that contributes substantially to the pollutant loadings of a physically interconnected MS4 already regulated under Phase II must be included in the program. To be "physically interconnected," the MS4, including roads

with drainage systems and municipal streets, is physically connected directly to a municipal separate storm sewer of another entity.

7) Is the storm water runoff from this MS4 effectively addressed by other water quality programs?
EPA will consider, on a case-by-case basis, whether the storm water runoff from a potentially designated MS4 is effectively addressed under other regulations or programs, such as the Coastal Zone Act Reauthorization Amendments, the National Estuary Program under Clean Water Act section 320, and/or other non-point source programs. Information in support of this criterion should be provided directly to EPA Region 6 by the candidate MS4.

B. Designation Process
EPA Region 6 is required to evaluate all small MS4s in New Mexico meeting the 10,000 population and 1,000 people per square mile density threshold, and to designate those that meet the criteria as needing NPDES storm water permit. In addition, final determinations on public petitions for designation received by EPA under 40 CFR Section 122.26(f) must be made by the Agency within 180 days from the receipt of the petition. EPA intends to work closely with all candidate MS4s to answer designation criteria questions, and will consider all reasonably available information for a particular candidate MS4 prior to making a final designation decision. Sources of information include, but are not limited to: U.S. Census Bureau statistics; state published Clean Water Act section 303(d) lists; EPA-approved TMDL analyses; endangered/threatened species listings as published by the U.S. Fish and Wildlife Service; other supplementary information as provided by the candidate MS4; and/or other sources.

In general, water quality considerations and overall impacts of storm water discharges will be given more "weight" than population characteristics in this decision-making process. EPA Region 6's Census 2000 list of small MS4s that either meet or may meet the threshold of having a population of at least 10,000 and a population density of at least 1,000 people based on 1999 & 2000 population statistics, are listed in Addendum D.

Glossary
Note: This glossary is provided for informational purposes only; legal definitions of these terms can be found in the Code of Federal Regulations at 40 CFR 122 or at 33 U.S.C. § 1362 (CWA § 502)

Municipal separate storm sewer means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having
jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges

to waters of the United States;
(ii) Designed or used for collecting or conveying storm water;
(iii) Which is not a combined sewer; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR Section 122.2.

Physically interconnected means that one MS4 is connected to a second MS4 in such a way that it allows for direct discharges to the second system. This would also apply to interconnections between a portion of a MS4 located within an Urbanized Area and the remainder of the same MS4 located outside the Urbanized Area.

Regulated small MS4 means an MS4 which is automatically designated for inclusion in the Phase II storm water permitting program by its location within an urbanized area, or by designation by the NPDES permitting authority.

Small municipal separate storm sewer system means all separate storm sewers that are:
(i) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges to waters of the United States.
(ii) Not defined as "large" or "medium" municipal separate storm sewer systems pursuant to 40 CFR Sections 122.26 (b)(4) and (b)(7).
(iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Urbanized Area: For Census 2000, the Census Bureau classifies "urban" as all territory, population, and housing units located within an urbanized area (UA) or an urban cluster (UC). It delineates UA and UC boundaries to encompass densely settled territory, which consists of: core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. In addition, under certain conditions, less densely settled territory may be part of each UA or UC. The definition of UC, since it goes down to a density of 500 per square mile and a population of 2500, does not exactly correlate to the list of small MS4s requiring designation review, which is limited to those with a density of 1000/square mile and a population of 10,000-50,000.

Addendum E. Region 6 Review of Small MS4s For Designation Under 40 CFR 123.35(b)(2)

EPA Region 6 designation review of small MS4s under 40 CFR 123.35(b)(2) was limited to those small MS4s in areas for which EPA is the NPDES Permitting Authority. All the candidate MS4s are located in New Mexico. The cities/areas listed in this addendum met the 10,000 population and 1,000 per square mile density criteria as of the 2000 Census. Population density and 2000 information was obtained from the U.S. Census website at http://www.census.gov/main/www/cen2000.html.

Based on the information summarized in Table 1, EPA has determined that designation of Alamagordo, Artesia, Demming, Gallup, Hobbs, Los Alamos, Portales, and Silver City is not necessary at this time in order to protect water quality. The size, growth rate, potential for discharges reaching a live water, and proximity to sensitive or impaired waterbodies were factored into this decision. All other regulated storm water discharges associated with industrial or construction activities within these communities will continue to be subject to the permit requirements of the NPDES storm water program, providing continued protection for water quality from pollutants in such discharges.

Region 6 requests input from the public and affected municipalities before making a final designation decision on Clovis, Las Vegas, and Roswell. EPA also welcomes input on any of the other candidate MS4s. EPA is particularly interested in any data on the quality of storm water discharges from these communities, known impacts on local water quality, and any programs already in place at the local level to mitigate the impacts of municipal storm water discharges on local receiving waters.

Note that none of the potentially designated MS4s has an obligation to apply for a permit until formally designated as a regulated small MS4 by the Director. No NPDES permit would be required for discharges to waterbodies that are not waters of the U.S. Any designated MS4s will have at least 180 days from official notice of the Director's final decision to submit a permit application (see 40 CFR 122.33(c)(2)).

Table 1: Tentative Designation Decisions

Candidate	Population 2000	Population Density (per sq. mile)	Receiving Water: Does the MS4 discharge storm water to impaired or "sensitive waters" (ORW, Endangered Species, National Park waters, etc.)?	Significant contributor of pollutants to waters of the U.S.? (i.e., identified as source on 303(d) list or named in a TMDL)	High Pop. growth (10%+)? % change, 1990-1999[1]	Contiguous to an Urbanized Area?	Physically interconnected to another MS4?	Tentative Designation Decision
Alamagordo, NM	35,582	1,839.00	N	N	8	N	N	N
	Comments: Storm water would discharge to dry arroyos with no nearby connections to live waters.							

Candidate	Population 2000	Population Density (per sq. mile)	Receiving Water: Does the MS4 discharge storm water to impaired or "sensitive waters" (ORW, Endangered Species, National Park waters, etc.)?	Significant contributor of pollutants to waters of the U.S.? (i.e., identified as source on 303(d) list or named in a TMDL)	High Pop. growth (10%+)? % change, 1990-1999[1]	Contiguous to an Urbanized Area?	Physically interconnected to another MS4?	Tentative Designation Decision
Artesia, NM	10,692	1,341.30	N	N	2.1	N	N	N
	Comments: Storm water discharges would go 5-8 miles (primarily in intermittent Eagle Creek) before entering the Pecos River. Pecos Bluntnose Shiner is found above the city. Small city with low growth rate. Very little industry other than a refinery (would be controlled under permit for storm water associated with industrial activity). Average annual rainfall 12".							
Clovis, NM	32,667	1,458.90	Y	N	0.4	N	N	?
	Comments: Dischargers go to dry arroyos, no nearby connections to live waters other than several small lakes (playas) in area that are listed as water quality impaired by NMED. NMED indicates that there is significant recreation use of lakes. Canon AFB located at Clovis. Low population growth - but probably affected by AFB personnel trends. Average annual rainfall 17". Potential for designation due to water quality impairment of local lakes.							
Deming, NM	14,116	1,512.00	N	N	27.9	N	N	N
	Comments: Waterbodies appear to be dry/intermittent & in a closed basin. Discharges would go to the Mimbres River (well below range of endangered species near Mimbres, NM)							
Gallup, NM	20,209	1,513.70	N	N	3.3	N	N	N
	Comments: Rio San Jose. No Water Quality or aquatic/water-dependent species ESA issues known.							
Hobbs, NM	28,657	1,514.00	N	N	(-8.7)	N	N	N
	Comments: Dry Washes, no nearby connections to live waters. Negative population growth.							
Las Vegas, NM	14,565	1,938.20	Y	Y	9	N	N	?
	Comments: Storm water discharges would go to Storie Lake and/or the Gallinas River. The Gallinas River, which runs through town, is listed by the State as Impaired for unknown toxicity, streambed deposits, ammonia. State does not list urban storm water as possible source, but streambank destabilization is a listed cause. Las Vegas National Wildlife Refuge is nearby. No aquatic endangered species, but some birds including South Western Willow Flycatcher, Bald Eagle, etc. in county. Almost twice the 1000/Sq.Mi. pop. density "trigger" for designation review. Growth since 1990 implies would not reach Urbanized Area status by 2010 Census. Potential for designation due to local water quality impairment and presence of endangered species.							
Los Alamos CDP, NM	11,909	1,096.20	Y	N	~1	N	N	N
	Comments: County-run unincorporated "city." Storm water goes to arroyos leading to Rio Grande after roughly 20 miles. Expected to have higher daytime population due to Los Alamos National Lab (LANL) commuters and supporting service industries. Understand NMED may be proposing to list the arroyos leading to Rio Grande in the next 303(d) listing, but apparently for pollutants associated with past LANL activities - historical contamination probably better handled through industrial SW or RCRA or Superfund, etc.							

Candidate	Population 2000	Population Density (per sq. mile)	Receiving Water: Does the MS4 discharge storm water to impaired or "sensitive waters" (ORW, Endangered Species, National Park waters, etc.)?	Significant contributor of pollutants to waters of the U.S.? (i.e., identified as source on 303(d) list or named in a TMDL)	High Pop. growth (10%+)? % change, 1990-1999[1]	Contiguous to an Urbanized Area?	Physically interconnected to another MS4?	Tentative Designation Decision
Portales, NM	11,131	1,624.90	N	N	(-3.4)	N	N	N
	Comments: Local waterbodies appear dry/intermittent with no nearby connections to live waters. Small size and negative growth.							
Roswell, NM	45,293	1,565.20	Y	N	7.1	N	N	?
	Comments: Storm water discharges would go to Rio Hondo and Hagerman Canal (both perennial) thence Pecos River. Rio Hondo crosses part of Bitter Lake National Wildlife Refuge on way to Pecos River. MS4 discharges would not appear to have impact on Pecos Gambusia, which lives in springs along the Pecos River. Pecos Bluntnose Shiner is found in the Pecos along areas where Rio Hondo enters Pecos R. Close to the 50,000 population threshold for Urbanized Area and decent growth (but at 7% growth may not be an Urbanized Area in 2010). Average annual rainfall 15". Potential for designation due to presence of aquatic endangered species and national wildlife refuge.							
Silver City, NM	10,545	1,040.10	N	N	11.9	N	N	N
	Comments: Waterbodies appear to be perennial through town - intermittent below and area is in a closed basin. SW enters tributary to Mimbres R. in area that goes intermittent. (enters Mimbres R. below range of endangered Chihuahua Chub above Mimbres, NM). Scheduled for stream survey next year. Average annual rainfall 12"							

1.(SU-99-5) Population Estimates for Places: July 1, 1999, and Population Change: April 1, 1990 to July 1, 1999. Source: Population Estimates Program, Population Division, U.S. Census Bureau, Washington, DC 20233. http://eire.census.gov/popest/archives/place/SC10K-T4.txt. Note: Los Alamos County total pop. est. was 18115 in 1990 and 18281 in 1999 for growth of approx. 1%. A growth rate of 10% or more was considered to be a relatively high growth rate.